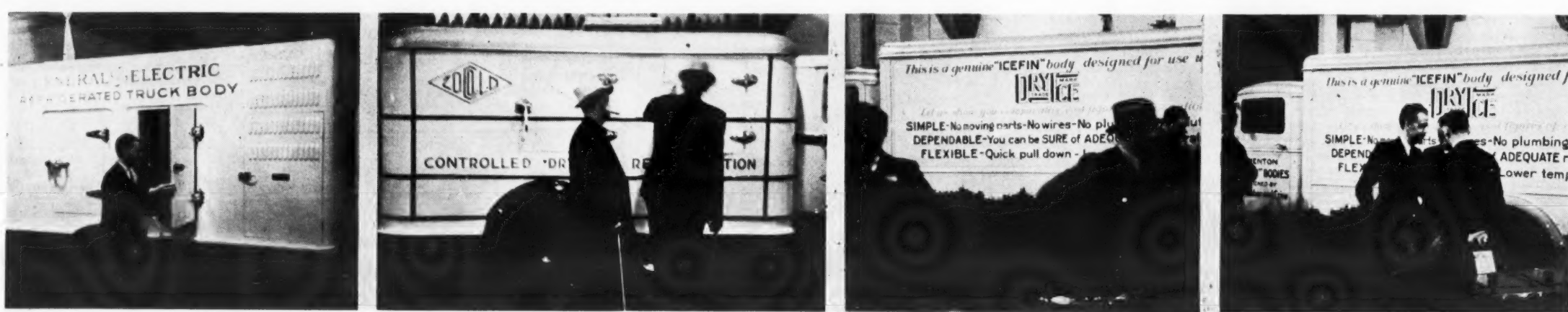


Annual Dairy Industries Show Draws Refrigeration Exhibits

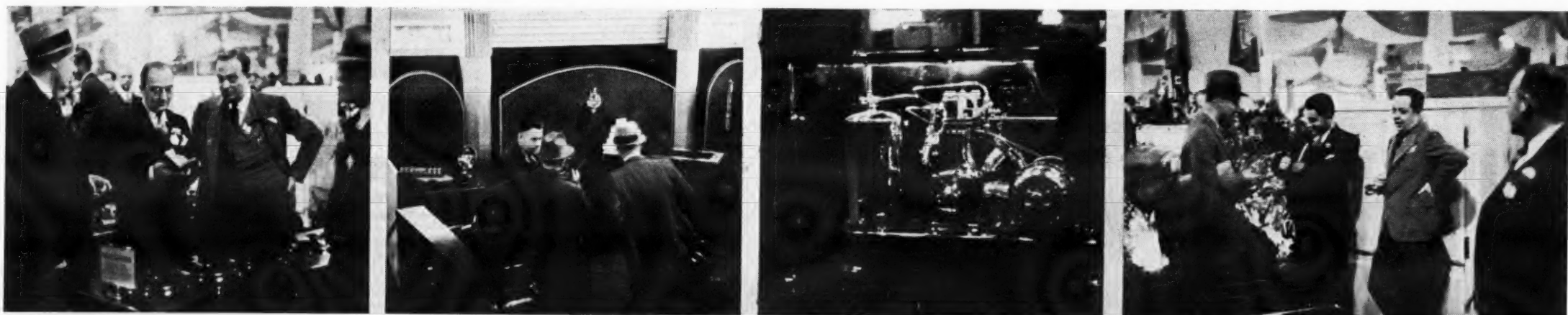
Frigidaire, Kelvinator, Universal Cooler, General Electric, York, Copeland, Anheuser Busch, Chester Dairy Supply, Creamery Package, Kold Hold, and Many Others Display Products In Cleveland



(1) Complicated machinery like this was displayed to thousands of interested dairymen who attended the eighth dairy industries exposition at Cleveland recently. (2) Corner of Chester Dairy Supply Co.'s exhibit. (3 & 4) Universal Cooler exhibits at the show featured refrigeration equipment for retailers of dairy products.



(1) A refrigerated truck was the only G-E exhibit at the show. (2, 3 & 4) Trucks refrigerated by solid carbon dioxide were in the ascendancy among the exhibits.



(1) Frigidaire had a strong selling force prepared to talk to those interested in its ice cream cabinets and other equipment. (2) Two prospects are given the Kelvinator story by a crack floor salesman. (3) Kelvinator's "million dollar" chromium-plated unit. (4) Frigidaire had household refrigerators in its exhibit. Above you see a salesman (dark suit) pocketing a signed order.



All four of the above pictures were taken in the Anheuser-Busch exhibit. As can be seen, Copeland machines were also on display in the exhibit.



Refrigerated trucks again captured major attention at the show. (1) Kold-Hold's refrigerated truck and forced-convection system for milk hauling were ably demonstrated. (2) Waltham System presented its cartridge refrigeration for trucks and ice cream cabinets. (3) Meyer Body Co. had its big trucks very much in evidence. (4) Mathieson solid carbon dioxide was offered to truck users who prefer this method of refrigeration. Candid camera pictures on this page were all taken by the editor.

REFRIGERATION NEWS

ESTABLISHED 1926. MEMBER AUDIT BUREAU OF CIRCULATIONS. MEMBER ASSOCIATED BUSINESS PAPERS. MEMBER PERIODICAL PUBLISHERS INSTITUTE.

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Business News Pub. Co.

DETROIT, MICHIGAN, NOVEMBER 7, 1934

Entered as second-class
matter Aug. 1, 1927THREE DOLLARS PER YEAR
TEN CENTS PER COPY**47,600 Domestic
Units Shipped in
Sept. by Industry****Sales of All Firms Total
1,272,600 Refrigerators
In Nine Months**

DETROIT—Following the downward trend which characterized business conditions in general during September, industry sales of household electric refrigerators to all distributors and dealers fell off sharply during the month to 47,600 units. This figure shows a 47 per cent decrease from August of 1934 when sales were estimated at 90,200 and is 34 per cent lower than the figure for September, 1933, which was set at 72,300 units.

During the first nine months of the current year, industry manufacturers shipped 1,272,600 household electric refrigerators to distributors and dealers throughout the world, this being about 33 per cent ahead of the same period of 1933 when sales totaled 956,800 units.

In spite of the sharp decline in volume experienced during the month of September, sales for the first three periods of 1934 are 18 per cent ahead of the mark of 1,080,700 set for the entire twelve months of 1933.

Domestic sales by industry companies totaled 38,100 units for September bringing the cumulative total for United States to 1,183,600 for the nine-months period. Industry manufacturers exported an estimated 9,500 household electric refrigerators during the month for a cumulative export total of approximately 89,000 units.

Shipments reported for 13 members of the Refrigeration Division of the National Electrical Manufacturers Association (Nema) totaled 42,120 units for the month of September bringing the nine-months figure to 1,124,975. Nema sales in the United States only amounted to 33,668 during September making a nine-months total of 1,046,287. Exports by Nema companies totaled 8,452 units for a cumulative figure of 78,688.

The following 13 member companies reported September sales to the association: Crosley, Frigidaire, General Electric, Gibson, Kelvinator, Leonard, Norge, Servel, Stewart-Warner, Sunbeam, Uniflow, Universal Cooler, and Westinghouse. Included in the Nema report were units manufactured by member companies for Major Appliance Corp., Potter Refrigerator Corp., Montgomery Ward & Co., Sears, Roebuck & Co., and Truscon Steel Co. Members not reporting sales were Apex, Jomoco, Merchant & Evans, and Sparks-Withington.

The detailed report of Nema sales for September will be found on page 13 of this issue.

**TVA-Knoxville Deal
Not Completed**

KNOXVILLE, Tenn.—The time limit on the agreement that would have enabled the Tennessee Valley Authority to purchase electrical equipment for supplying Knoxville with TVA power expired Oct. 31 without the deal being consummated.

The equipment which the TVA sought belongs to the Tennessee Public Service Co. After long negotiation, the company agreed to sell the property to TVA for \$6,191,000, and the sale was to take place by Oct. 31. Bondholders had agreed and had deposited their bonds, which were to be redeemed when the cash was paid over by the TVA.

What held up the deal was the opposition of 13 coal and ice companies, who fear the competition of water-power electricity and electric refrigeration. They fought approval of the sale in hearings before the state's public utility commission, contending that the TVA purchase was unconstitutional.

The commission ruled the sale was in the public interest, in that it would bring cheaper electricity to Knoxville, but the commission would not rule on the question of constitutionality.

On Oct. 26 the coal and ice companies carried their fight to the circuit court at Nashville, applying for an order restraining the TVA from going ahead with its purchase.

The injunction was granted and then thrown out the next day by the

(Concluded on Page 7, Column 1)

**Seeger Constructing
20,000 Sq. Ft.
Addition**

ST. PAUL—Seeger Refrigerator Co. is erecting a new building with 20,000 sq. ft. of floor space here to handle an increase for Seeger commercial refrigerator, household cabinet, and beer cooler products, company officials have announced.

The new addition will house a part of the metal working department, and the entire plant is being revised to increase the firm's production capacity. The household cabinet division will now be able to turn out 50 cabinets per hour, it was announced.

**Engineers Will Open
Convention Dec. 6**

NEW YORK CITY—Complete program for the 30th annual winter meeting of the American Society of Refrigerating Engineers to be held at the Hotel New Yorker here, Wednesday, Thursday, and Friday, Dec. 6, 7, and 8, has just been announced. The meetings have been arranged in four groups of three talks each on related fields.

The first, Wednesday morning, is on "Technical Problems," under the chairmanship of A. R. Stevenson, president of the society. Speakers will be R. U. Berry of General Electric's air-conditioning department on "Air as a Refrigerant"; Philip Drinker and W. L. Pierce of the Harvard School of Public Health on "Air Conditioning and Odor Control"; and A. D. Moore of the University of Michigan on "Visual Heat Transfer Measurement."

The welcome luncheon Wednesday noon will be addressed by David C. Coyle, a speaker on economic issues.

Wednesday afternoon's meeting will be on "Refrigeration of Foods," with A. H. Baer, past president of the society in the chair. Speakers will be A. W. Ewell of Worcester Polytechnic Institute on "Storage of

(Concluded on Page 16, Column 5)

**Detroit Refrigeration Code
Up Again This Friday**

DETROIT—Halstead Mills, chief safety engineer of the City of Detroit, announces that a meeting to consider Detroit's refrigeration ordinance will be held at 2 p. m. Friday, Nov. 9, in the City Service building. The meeting will be in charge of Joseph P. Wolff, commission of the department of buildings and safety engineering.

**Winslow Moves
Three Factories
To Detroit Plant****Copeland, Mayflower and
Zerozone Operations
Being Moved**

DETROIT—Copeland, Mayflower, and Zerozone electric refrigeration equipment will henceforth be manufactured in Detroit and sales of these products will be directed from offices in the Motor City, it was announced last week by Dallas E. Winslow, president of Winslow-Baker-Meyering Corp., parent corporation of Copeland Refrigerator Corp., Trupar Mfg. Co., and Zerozone Corp.

A long-term lease has been taken on the manufacturing plant at 1331 Holden Ave. here formerly occupied by the Lincoln Motor Car Co. and now owned by Murray Body Corp.

Expansion of production facilities and centralization of sales activities were given as the reasons for this move by Mr. Winslow.

Other new manufacturing units of Winslow-Baker-Meyering Corp. may be housed in the Detroit plant as they are acquired in the future, Mr. Winslow declared.

Removal of machinery and equipment from the Copeland plant in Mt. Clemens has already started, Mr. Winslow said, and the plant will probably be entirely vacated by Dec. 1.

Persons now employed at the Copeland plant will be given the option of taking employment with the firm in its new location.

**Carbondale Merges
With Worthington**

CARBONDALE, Pa.—Consolidation of the Carbondale Machine Co. here with the Worthington Pump & Machinery Corp. of Harrison, N. J., has just been announced, and hereafter the refrigeration division of the merged organization will be operated as the Carbondale Machine Corp. with all manufacturing and sales activities in Harrison. Manufacturing equipment is being transferred from Carbondale to Harrison.

Products to be manufactured include Carbondale's condensers, piping systems, industrial compressors, filter presses, ice-making systems, and special processes equipment such as the oil-dewaxing apparatus which Carbondale has furnished refineries.

Announcement**To All Manufacturers of Refrigeration
And Air-Conditioning Equipment**

The 1935 REFRIGERATION DIRECTORY AND MARKET DATA BOOK, the third edition compiled for the refrigeration industry, is now being prepared. Manufacturers of household and commercial refrigeration and air-conditioning products who were not listed in the 1934 edition are invited to submit information which will permit proper listing in the new edition.

If you are a manufacturer of refrigeration or air-conditioning systems, equipment, parts, materials, supplies, or accessories your company name and products should appear in the 1935 DIRECTORY. There is no charge.

The following information about your company is desired:

1. Your company name and complete address, telephone number, and location of branch offices.
2. Officers and department heads who have supervision of refrigeration or air-conditioning business.
3. A detailed description of products manufactured for, or used by, the refrigeration industry.
4. The trade names of your products.
5. Descriptive literature or catalogs covering your products to assure proper classification.

Manufacturers who were listed in the 1934 DIRECTORY have already received questionnaire forms for correction of listings and are urged to return the necessary information promptly in order that the work of revising listings may proceed as rapidly as possible.

**Fairbanks-Morse' 1935 Line
To Stress Conservador Feature****Two Air Conditioners of
Cabinet Type Are Also
Placed on Market**

CHICAGO—Fairbanks, Morse & Co. of this city is entering the air-conditioning field with two cabinet-type units for year-round operation. They are designed for use of cold water as the cooling medium, but mechanical refrigeration may be used if desired.

Warm air passing through the "Ortho-Clime" conditioner is subjected to a two-stage temperature reduction. It passes over one bank of coils which effects the first drop, then over a second bank which is colder than the first because of the counter-flow of the cooling medium.

Cleaning of summer air occurs as it passes across the coils which have become wet during the dehumidification process. Warm air is drawn in through the rear of the cabinet by

(Concluded on Page 12, Column 4)

**Crosley Shows Net
Profit of \$412,942**

CINCINNATI—Crosley Radio Corp. reports, for the six months ended September 30, net profits of \$412,942, equal to 75 cents a share, as compared with a net profit of \$169,805, or 31 cents a share for the corresponding six months period in 1933.

For the quarter ended September 30, the net profit was \$72,274, equal to 13 cents a share, compared with \$340,668, or 62 cents a share in the previous quarter, and \$64,894, or 12 cents a share in the corresponding 1933 quarter.

Sales of Crosley electric refrigerators and radios for the six months ended September 30 totaled \$8,401,651, as compared with \$4,633,578 in the same period in 1933.

**Utilities Sales Moves
To Larger Quarters**

CHICAGO—Utilities Engineering Sales Co., wholesale distributor of tools, parts, supplies and accessories for electric refrigeration, has just moved to larger quarters at 410 N. Wells St. here, according to E. P. Sorensen, president of the firm.

The company will continue in its policy of doing no servicing, and handling products on a wholesale basis only, Mr. Sorensen stated.

A new catalog has just been issued, describing valves, fittings, tools, torches, tubing, gauges, belts, controls, expansion valves, gaskets, motor brushes, porcelain repair kits, compressors, compressor seals, refrigerants, oils and other products handled by the Utilities Engineering Sales Co.

**New Dealers Appointed
By Crosley**

CINCINNATI—A number of the largest retail stores in the country have just been added to the list of Crosley authorized dealers, it was reported by H. E. Richardson, assistant to Powell Crosley, Jr., in charge of sales, Crosley Radio Corp., upon his return from an eastern trip.

Among the newly designated retail outlets are: the Kresge department store, Newark, N. J.; Hecht's department store, Washington, D. C., which will now carry Crosley radios in addition to Crosley refrigerators; The Hub Furniture store, Washington, D. C.; Ludwig Bauman stores in New York City and Newark; Stern & Co., Whitehills, Ltd. Brothers and Schuman Brothers furniture store, all in Philadelphia; Marshall Field & Co., and Weiboldt's five stores in Chicago.

**Kelvinator Air-Conditioning
Production Dept. Enlarged**

DETROIT—Production facilities in the air-conditioning division of Kelvinator Corp.'s factory here are being expanded in preparation for the company's 1935 program in that field, according to officials. The sales division likewise is expanding its organization to promote air-conditioning sales next season.

By George F. Taubeneck
CHICAGO—"Three months free refrigeration each year" will be the theme of 1935 Fairbanks-Morse refrigerator advertising.

How do they get that way? Well, it's like this:

Fairbanks-Morse refrigerators for 1935 will all have the Conservador—newest of the devices (Glasser patent) for storing food within the door of the cabinet. This Conservador, say Fairbanks-Morse people, "plugs the costliest leak in refrigeration."

"When the door of the ordinary refrigerator is opened," they argue, "cold spills out. Thus a normal housewife loses 30 per cent of her refrigeration every day. The Conservador, which plugs the opening to the food compartment, has room on its shelves for the most frequently used foods—giving Fairbanks-Morse owners three months of free refrigeration each year."

The Conservador, principal feature of the new Fairbanks-Morse refrigerator, is the invention of Harold A. Glasser, sales manager of the home appliance division of Bruno-New York, Inc., former Gibson distributor in the New York territory. It was more than two years in the developmental process.

Patents Owned by Bruno

Upon receipt of the Conservador patents, Mr. Glasser assigned them to the Bruno organization, and the latter is now licensing Fairbanks-Morse to use them exclusively. For a time Briggs Mfg. Co. cooperated with Mr. Glasser in working out refinements for the door.

When the food chamber door is opened, it reveals the Conservador, a shallow compartment for storage of fruits, dairy products, and other small food items. This compartment is cooled through louvers in its back wall, and by direct transmission of cold through the wall, and actually serves as a second door to the main food chamber. As it swings out, the Conservador fits tightly against the refrigerator door. All models have this feature.

Inventor Glasser was for two years vice president of G. A. Barlow's Son Co., Trenton G-E distributor, then left that company to organize and work with Frye-Glasser, Inc., Detroit distributor of Stromberg-Carlson radios.

After two years in Detroit, he became associated with World Utilities Corp., old New York Norge distributor, and was sales manager of that concern for one year. This connection he terminated to take his present position with Bruno.

Distinct Styling Advance

Resembling the 1934 Norge and Kelvinator lines somewhat in appearance and general contours, the four 1935 Fairbanks-Morse refrigerator models represent a distinct styling advance over the 1934 line.

National retail list prices will not be established by the factory. Rather distributors will establish their own prices, based on the factory's recommended schedule for various zones. These will be approximately as follows: 4 cu. ft.—\$139.50, 5 cu. ft.—\$189.50, 6 cu. ft.—\$219.50, 8 cu. ft.—\$289.50.

Distributors saw the new line at a meeting held last week in Chicago's Hotel Stevens, and placed orders immediately. Irving Sarnoff of Bruno-New York, Inc., led off with an initial order of 1,500 boxes, while Roskin Distributors of Boston ordered seven carloads, and others—among them the Jenkins Music Co. of Kansas City—followed suit with additional carload orders.

A year-round unit air conditioner, the "Ortho-Clime," was also shown distributors (see details in column 4 of this page), as were the current Fairbanks-Morse radios (featuring the "International Travelite Dial," which enables owners to tell the correct time at whatever foreign station they may tune in), four washing machines, and an electric ironer.

Addison Brown, sales manager of Fairbanks-Morse Home Appliances conducted the sessions. He declared

(Concluded on Page 16, Column 1)

Finance Firm Explains Way to Make Instalment Sales Pay

Bankers-Commercial Security Co., Inc.
270 Madison Ave., at 39th St.
New York, N. Y.

Editor:

We were very much interested in reading your editorial in the Oct. 10 issue of your interesting paper. Since a number of the statements made in that editorial are at variance with an article which recently appeared in "The Bulletin," we thought you would be interested in seeing a reprint of our criticisms and suggestions as to merchandising by department stores.

As you probably know, "The Bulletin" is published monthly by the National Retail Dry Goods Association whose members comprise the

leading department and dry goods stores throughout the country. It was at their suggestion that the attached article was written, entitled, "Handling Instalment Sales At a Profit."

You will note that we agree with you that the adoption of a standard finance charge for all retailers, including department stores in any particular territory, is very necessary if relations between appliance retailers and their competitors among local department stores, are to be kept amicable. If you have an opportunity to do so, will you please write us your comments on our article.

W. R. BENTLEY,
Asst. Mgr., New Business Dept.

Adequate Finance Charge Is Called Key to Profits

Must Adopt Adequate Carrying Charge

"The first step in making instalment sales profitable is the adoption of an adequate finance or carrying charge. The time is past when a department store should attempt to compete with the local retailer of appliances by offering a lower charge on instalment accounts. Simple interest at the rate of six per cent per annum has definitely been proved to be an insufficient charge to meet all the expenses incident to handling instalment sales. While it is quite possible that the charge should vary, depending upon local conditions, we have always felt that a fair charge is about one-half of one per cent per month; that is six per cent for

twelve months on the balance to be financed.

Most Appliance Mark-Ups Too Low

"The heads of many of the large department stores who have been increasing their appliance sales volume by taking on refrigerators, oil burners, and similar products during the last few years, have found that the average mark-up they have been able to obtain on such merchandise is not sufficient to enable them to handle appliances at a profit. With department stores doing an increasing percentage of the total volume of appliance business, it may be necessary to change the present method of distribution and permit the manufacturer to sell directly to the larger stores.

Unsound Terms Reduce Net Profits

"In the attempt to increase their volume of appliance business, many stores have made the grievous error of offering unsound terms. Unusually low down payments and a longer time to pay are two of the most certain ways of cutting down net profit. Coupled with unsound terms, the department store's usual leniency in passing credits and following collections has probably been the reason for the elimination of supposedly unprofitable appliance departments by many stores. Successful appliance retailers in every city have demonstrated that there is money to be made in the retailing of all classes of household appliances, if these vital factors are properly controlled.

"While we have not found that credit policies have been the greatest objection to department store methods, there is generally room for improvement in that phase of making instalment sales profitable. A poor charge account will never become a good instalment account merely because the purchaser signs a title-retaining document. Possibly the answer to the credit problem lies in employing a credit manager who has received his training in some large instalment furniture house, or who has worked with a successful appliance dealer, or even with a finance company.

Collections Often Neglected

"In our opinion the lenient policy of most department stores with respect to following collections promptly can be held accountable for most of the poor experience of stores doing a volume of instalment business. The leading department stores in every city have always felt that a strict collection policy would curtail their business, whereas it has been definitely proved that such is not the case. While the methods employed by

a finance company may not be entirely adaptable to a department store, nevertheless it should be more generally appreciated that the full profit in an instalment sale is never realized until the last payment has been collected. The finance company recognizes this fact, but department stores are generally too lax in following collections closely and in making repossessions promptly when it becomes apparent that an account will not pay within a reasonable time. Without doubt, there is more room for improvement in department store methods with respect to handling collections than in any other phase of their time-payment operations.

Meter Plan a New Development

"During the past three years, there has appeared on the horizon a new 'star' to lead department stores to an increased volume of electric refrigerator sales. I refer to the so-called Meter Plan which has been used by hundreds of stores throughout the country in an effort to increase their refrigerator volume. There can be but little question that offering to sell refrigerators on the basis of nothing down and only 15 cents or 25 cents per day will attract a number of prospective purchasers who have previously felt that they could not afford electric refrigeration. If advertising of this plan did nothing more than attract an additional amount of store traffic, it might be considered profitable without a single sale being made on that basis.

"Those stores which have been successful in developing a profitable refrigerator volume by using the Meter Plan have checked customer credit just as carefully on Meter Plan sales as they would if the customer made the usual down payment of 10 per cent. By having a collector call on the customer two or three times during the first month, to see that the operation of the meter is thoroughly understood and that it is expected the full amount of the monthly instalment will be deposited before the end of the month, these stores have been able to report an unusually satisfactory collection record on Meter Plan contracts. A number of stores who have found that they are tying up a considerable amount of working capital in selling hundreds of refrigerators on the Meter Plan, have made arrangements to have us handle such contracts for them. Thus, we have had an opportunity to compare the operation of this plan in several sections of the country.

"A recent survey among representative furniture, department, and specialty appliance stores indicated that from 65 to 90 per cent of their total refrigerator sales were being made on the Meter Plan basis. Most of these stores appreciate that the Meter Plan method is a selling adjunct and not a collection proposition. Therefore, it is interesting to note that they reject from 30 to 50 per cent of the credit applications received on Meter Plan prospects. About half of the stores reporting stated their collection experience on Meter Plan accounts was as good as on regular down payment sales. The remaining stores reported that their Meter Plan paper was paying better than regular plan contracts, indicating that, when properly sold, the meter can assist in making collections. In conclusion, it was the unanimous reply of all the stores reporting that they expected to continue selling on the Meter Plan indefinitely.

New Appliances to Be Considered

"The selling of automatic heating equipment by department stores is too recent a development to permit any generalization as to their success in merchandising such products as oil burners, air-conditioning equipment, humidifiers, etc. Until the last year or two, oil burning equipment could not be considered, in any sense, as representing 'package' merchandise. However, with a competent outside installation crew, it is now possible for department stores to do a substantial volume of oil burner business. Such sales are practically always made to home owners and, as they represent an improvement to the owner's property, a time payment contract secured by a properly installed burner represents one of the best classes of instalment paper now being created in the appliance field. After determining the paying ability of the customer, it is necessary that the property where the installation is to be made be carefully checked to see that mortgages are based on a fair resale value and that taxes are paid up to date.

"As a logical adjunct to the sale of oil burning and other automatic heating equipment, department store operators should keep in close touch with new developments in the air conditioning field. While a number of the larger manufacturers have already brought out unit air conditioners, there will undoubtedly be many changes in such equipment during the next year or two. At the present time, we feel that the sale of this type of equipment is not adaptable to department store methods, since the services of competent engineers are generally required to make a survey of the premises and to see that

installations are made in a satisfactory manner.

"From the foregoing, it is evident that, with proper safeguards, a department store can profitably increase its volume of time payment sales. With a substantial gain in this class of business, a large part of a store's normal working capital may be 'frozen' in long term instalment contracts. The problem of releasing this 'frozen' working capital, when needed, becomes a vital factor of profitable operation.

"Fortunately or unfortunately, the attitude of commercial banks toward making unsecured loans to department stores has been decidedly changed during the past few years. During the period prior to 1932, many stores, with the assistance of local banks, embarked upon ambitious building programs which decreased their available working capital very materially. When these stores found themselves in such a position that the calling of short term bank loans made it impossible for them to meet their obligations promptly, they learned the fallacy of depending upon short term financing to take care of long term financing requirements.

"It has been commonly assumed that the cost of using the service of a finance company is much higher than bank rates. If a bank never requested a store to 'clean up,' it would be true that bank rates are lower than finance company rates. However, it is now the practice of most banks to ask all borrowers to stay off their books for at least a few months every year or oftener. Taking into account the substantial reciprocal cash balances required and the further fact that a store must build up gradually a cash balance at the bank to meet short term loans when due, it may be shown that finance company charges are often no more than the true cost of borrowing from banks. In addition, the user of finance company funds receives financing over the entire life of contracts. This is impossible when financing through short term bank loans, except by frequent renewals.

"It is expensive to increase a store's permanent working capital to handle a fluctuating volume of instalment sales. Therefore if financing instalment paper will permit a store to handle an increased volume of sales at a profit, it is entirely sound to use the services of a finance company. With the adoption of an adequate carrying charge, it is often possible to have the entire cost of such financing borne by the customer. Of course, the charges made by a finance company depend largely on the annual volume of contracts financed, the amount of collection assistance supplied, and the immediate cash advance desired. It is important in considering any finance plan, that a store should not lose contact with its customers, who should continue to call at the store when making their payments. Thus an opportunity is gained for the sale of additional merchandise to regular paying customers on a continuing basis.

"In looking at the whole matter from a broad and unbiased standpoint, it is readily apparent that many stores can profit by financing their long term instalment contracts. It can no longer be considered a sign of weakness to finance paper, if it can be definitely shown that a store will be in a position to handle additional profitable business by so doing. We are confident that executives of aggressive stores who investigate with an open mind the whole question of financing instalment paper will be entirely convinced of the profitability of such a step."

Cutaway Cabinet Section Added to Promotion Kit

MANSFIELD, O.—As an addition to its "dramatic demonstration kit," the refrigeration department of Westinghouse Electric & Mfg. Co. has made a cut-away section of a Westinghouse household refrigerator cabinet available to their refrigeration dealers.

This cut-away section is a horizontal piece that includes a corner, one side, and the micarta stripping for the door jamb, actually cut from a standard Westinghouse refrigerator.

It shows a section of the food compartment surface, a complete section of insulation, and the exterior finish. In this way a salesman can pick up the cutaway section and let the prospect examine it thoroughly, giving him a better conception as to the actual construction of a refrigerator than any other arrangement.

Bauer Leaves for Crosley Meetings in Louisiana

CINCINNATI—Neil Bauer, field sales manager, Crosley Radio Corp., has left to attend dealer sales meetings in Louisiana.

Mr. Bauer will attend a meeting Nov. 6 which will be held by the Interstate Electric Co. On Nov. 9 he will be in Shreveport, La., for the meeting of the Lee Hardware Co.

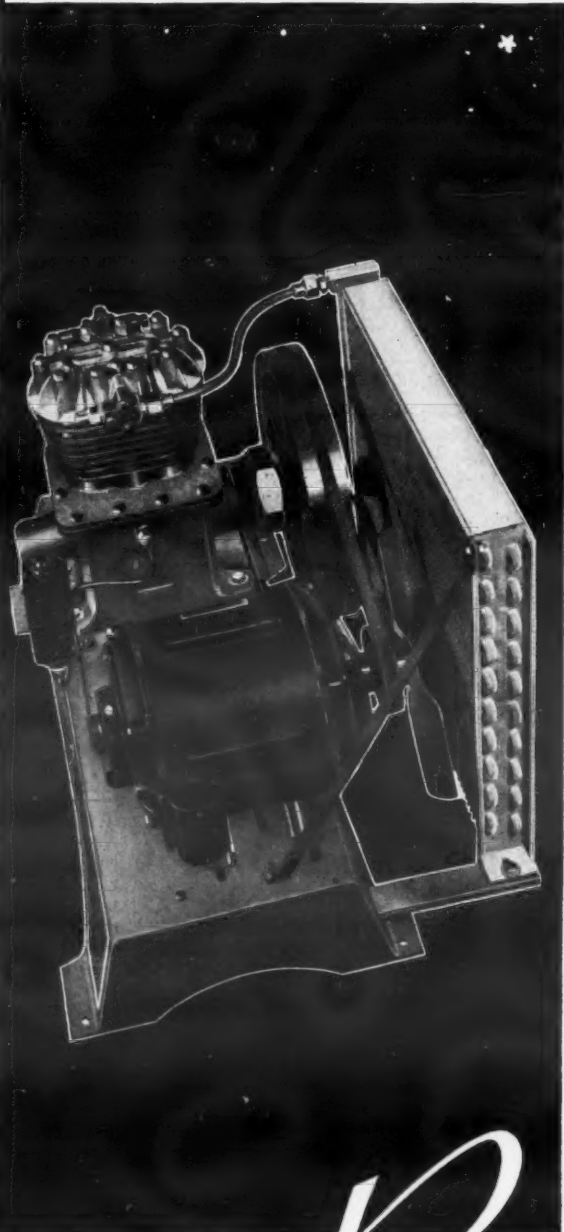
A RECORD OF OUTSTANDING

Brilliance
the fastest growing
name in the industry...

THE reputation made by a product in service soon overshadows any claims made by the manufacturer of that product. BRUNNER makes many assertions about the ruggedness, the dependability... yes, and also the superiority of BRUNNER Compressors. And we have been making such assertions for some time back. The unusual fact is that the product, in this instance, backs up what the producer says. Actually, expressions of satisfaction from buyers of BRUNNER equipment exceed our own advertising in their enthusiasm. In sum, BRUNNER has become the fastest growing name in the industry because we build a better compressor. Six models. Seventeen high-sides. Air or water cooled. Gas engine or electric. 1/6 H. P. to 3 H. P. Complete details in our catalog. We'd appreciate mailing a copy to you. Brunner Manufacturing Company, Utica, N. Y., U. S. A.

Brunner

A NAME BUILT BY 28 YEARS OF SERVICE





300% ahead of last year

*Sales of complete General Electric Kitchens
for first 9 months of 1934 are 300% ahead
of sales for first 9 months of 1933* ★ ★ ★



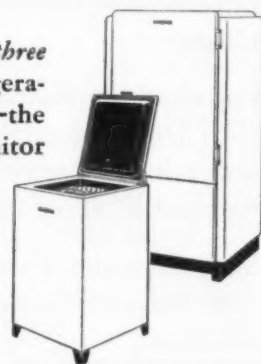
THE modern all-electric kitchen is no longer a dream in the minds of America's homemakers. It is fast becoming a reality. Witness G-E Kitchen sales this year as compared with last year. 300% ahead! Three sales now where only one grew before. And the trend is definitely UP.

General Electric retailers featuring the General Electric Kitchen are in an enviable position. They profit on complete kitchen sales. They profit on sales made under the G-E Step-By-Step Plan of acquiring the complete General Electric Kitchen. On this plan it is possible to make 3 profits per customer—a refrigerator profit, a range profit and a dishwasher profit.

The National Housing Act now enables home owners to modernize their kitchens on extremely liberal terms. Retailers of General Electric Kitchen appliances are going after this business and are getting it.

Using the G-E Kitchen as the background of their sales effort, G-E dealers are rapidly building a permanent, profitable business that is ever on the increase. Write for details of the *exclusive* G-E Kitchen plan or selling, and for facts about the General Electric franchise. General Electric Company, Specialty Appliance Sales Dept., Section DF111, Nela Park, Cleveland, Ohio.

● Shoppers can see all three types of electric refrigerators at the G-E dealer's—the General Electric Monitor Top, Flat-top and Lift-top models. Prices now as low as \$77.50 (plus freight and \$5 for five-year protection plan).



GENERAL  ELECTRIC
ALL-ELECTRIC KITCHEN

COMPANION MERCHANDISE

G-E Completes Plans for Sale Of Companion Appliances

BRIDGEPORT, CONN.—Following the general promotion program for G-E appliances (other than refrigerators, ranges, and dishwashers) inaugurated a year ago, the merchandise department of General Electric Co. has completed work on a series of campaigns for the 1934-35 fall and winter season, according to J. W. McIver, manager of sales promotion, appliance division.

There are two campaigns planned for promoting electric cleaner sales. One, "A New Road to Profits," is based on a study of retail selling through large outlets interested primarily in building store traffic and offering store service.

Three new cleaners have been designed and will be featured in the campaign. One is intended for use as a leader.

According to the plan, department stores using it will set up a special section where housewives can obtain information and ideas on home arrangement and equipment. G-E cleaners will be featured in one part of this section.

Other campaign is the "Get 'Em In" activity, designed to aid dealers in outside selling. Special attention will be given the replacement market. The problem of how to get salesmen by the door is being met by use of "Rug Talks," to be given away by cleaner salesmen at the homes they visit.

To aid the dealer in promoting the activity, a variety of sales promotion materials are provided, including newspaper advertisements, window and store displays, folders; and, for sales training, films, sales manuals, and pocket cards. The latter provides outside appliance salesmen with handy information on all cleaners in the G-E line.

Utilities are being enlisted in a campaign to promote sales of G-E electric clocks. The program calls for the services of every employee, and at the end of the campaign, prizes will be awarded for outstanding performance in sales of clocks, which will be presented in vari-priced assortments.

One of the promotion devices recommended to dealers is the new "Merchandiser," a metal display piece holding six clock models. In 2½ ft. of counter space the unit establishes a complete clock department. On it a card tells the G-E clock story, and full-line folders provide "trade-ups" to clocks not shown on this display.

G-E's new home laundry equipment program is really a "dealers' campaign for dealers," as retailers'

suggestions played an important part in its formulation. Called "Ring the Bell," it is not primarily a selling contest, though prizes will be awarded to stimulate dealer interest.

Real objective is to increase laundry sales by bringing to dealers' attention sales methods suitable not only as a temporary stimulant to their business but will increase the year-round efficiency of their selling operations.

General Electric's fall and winter sunlamp promotion efforts are directed for the most part toward development of the market through the medium of retail outlets.

The "4 Way" campaign, around which spring sunlamp activities were built, will be continued, although it is now essentially a department store operation.

Program calls for installation of a "sunshine room" for store patrons, use of two activities for developing leads, a "Sunshine Essay Contest," newspaper and radio advertising, direct mail activities, window displays and score cards.

A "central station plan" has been developed for central stations, whether they are engaged in merchandising or not. For active merchandisers, complete data on sunlamp selling are given. For non-merchandisers, the plan provides an outline of sunlamp activities by means of which central station utilities can tie in with local dealers.

During the 1934-35 winter season, promotion activities on General Electric fans will be devoted largely to window ventilating models. Campaign material used in the past is being revised for the new season's operations.

The radio program will be aimed at a four-fold market, prospects for all-wave sets, auto sets, battery sets and conventional sets.

Advertisements will appear in national magazines, supplemented by trade advertisements featuring reproductions of those appearing in the national field.

Promotion campaign for dealers revolves around the "Bandwagon" activity, a sales contest lasting five months. At its conclusion the dealer in each district who oversells his quota to the greatest extent will win a trip to G-E's "House of Magic" in Schenectady. Merchandise prizes will be awarded to other outstanding dealers.

A house organ, "The Bandwagon," will supply dealers each month with information regarding the campaign, data on new merchandise, sales hints, service notes, etc.

Philadelphia Firms Open Water Heater & Range Campaign

PHILADELPHIA—A huge advertising and sales promotional plan has ushered in the fall electric range and water heater campaign which, under the sponsorship of the Electrical Association of Philadelphia, opened Sept. 24 and will continue until Dec. 24.

The Philadelphia Electric Co. is cooperating by fostering a plan whereby customers in approved standing may purchase any of 10 makes of ranges for a down payment of \$2 with long-term payments, and free installation.

More than 400 local appliance dealers are competing in sales contests on ranges and water heaters during the period of the campaign.

Advertising and publicity consists of display advertisements in five metropolitan and 11 suburban newspapers, a complete billboard showing, premiums, and cooking demonstrations.

Realizing the necessity of a proper educational effort in conjunction with a sales campaign on appliances of this type, the Electrical Association has accorded dealers and distributors throughout the whole territory the services of Miss Alice K. Altman, widely known home economist, for cooking demonstrations.

In combating sales resistance, the association has made available to dealers, free of charge, a seven piece kitchen set of aluminum ware, which is given to each purchaser of an electric range.

In order to place the sales effort on as efficient and effective basis as possible, a complete manual for salesmen, covering all of the questions arising in selling a customer, has been issued by the association.

Also, the association has issued a plan book, covering all the phases of the campaign, which is distributed to dealers. Many other forms of advertising matter, including window display helps, are available for the dealer.

G-E Kitchen Employed In Cooking School

CLEVELAND—A complete General Electric kitchen furnished the stage setting for the cooking school which *The Cleveland News* recently sponsored at Cleveland's public music hall in conjunction with several food and home equipment manufacturers and distributors, among them Electrical Housekeeping, Inc., distributor of G-E appliances in the Cleveland area.

Mrs. Frances Troy Northcross, nationally known food authority and lecturer, assisted by Miss Mary Ann Kidd, conducted the four-day course. A daily attendance of approximately 4,000 women was recorded.

Prestige was given to the affair through the cooperation of prominent members of greater Cleveland's many women's clubs who acted as hostesses.

The Cleveland News school was one in a series of 102 newspaper cooking schools which the Home Economics Service Corp. is conducting in cities in the east, south, and midwest.

14 Dealers in Nashville Are Now Selling Electric Ranges

NASHVILLE—Fourteen local department and furniture stores and electrical dealers here are now carrying one or more makes of electric ranges.

Tennessee Electric Power Co. has tied in with the stores' activity with newspaper advertising stressing the economy of cooking electrically under reduced rates. Below the advertisements are listed the names of all the stores displaying ranges and the brands they carry.

John P. Hughes, manager of Cain Sloan Co.'s electrical department, reports sales of 100 Lindemann & Hoverson electric ranges.

Toledo Police Department Is First Purchaser of G-E Workshop

CLEVELAND—The first sale of a General Electric workshop was made Oct. 20 by Fred Gorham, salesman for the H. G. Bogart Co., Toledo G-E distributor.

The purchaser, S. Black, is radio inspector for the Toledo Police department in charge of squad car radios and the city's fire alarm system. Black is using the machine in his workshop in the police garage.

Two days later the Bogart company sold a second workshop to a gas company employee who noticed the machine in the distributor's window, stopped in, and bought it.

Comfort for Much-Photographed Stars



Honey Dean, winsome NBC artist, has her picture taken in the Rockefeller Plaza studio, a Westinghouse conditioner keeping the air cool and comfortable despite intense heat from the battery of lights.

C. I. T. Will Finance Sales of Radios for Crosley Dealers

CINCINNATI—A plan to finance radio sales for dealers has been announced by Powell Crosley, Jr., president of Crosley Radio Corp., here. Arrangements have been made with Commercial Investment Trust Corp. whereby sales of all Crosley radio receiver models can be financed where required.

This is the first time since 1929 that independent finance companies have been willing to accept radio paper. Crosley has had this plan in effect with C.I.T. on Crosley refrigerators for the past three years.

Comments Mr. Crosley: "The restoration of financing for radio sales is a manifestation of the fact that finance companies recognize that the radio industry today is as basically sound as other industries, and that the product itself is so well standardized that the hazards of the pioneering period of both the industry and the product have passed."

New Radio Receiver Has Bottle and Games Compartment

CHICAGO—Something novel in the radio field is being introduced by the Reliable Sales Co. here in its new "Pla-Pal" receiver, a table-model set with swing-out compartments containing cards, chips, dice, six small glasses, and three bottles for America's recently legalized refreshment.

Listing for \$34.95, the radio is a four-tube, all-electric set covering a full broadcast range. It has a five-inch dynamic speaker and is housed in a burlwood cabinet with chrome grille and fittings. Standard model is 110 volts, for a.c. or d.c. current, but models for 220 volts are available, as are those for 32-volt or six-volt farm operation. The set is R.C.A. licensed.

Width of the Pla-Pal is 14½ in., its depth is 6 in., and its height, 9½ in. Top of the set lifts up to disclose the deck of cards, 100 poker chips, and set of dice.

An outward push swings out the left end of the cabinet, which is compartment having two racks in which sit six glasses, while the right end is a similar compartment containing three matched beverage bottles.

A one-year guarantee protects the user on defective workmanship, and a four-month guarantee covers the tubes, according to A. Dahl, president of Reliable Sales Co., which is located at 758 Jackson Blvd.

Standard Range Featured By Legless Construction

TOLEDO—Feature of the new "Jewel Box" electric range brought out by the Standard Electric Stove Co. is its legless, all-enclosed construction.

Toe space is provided at the bottom of the range by a recessed kick plate. Exterior finish is in two-tone ivory porcelain enamel.

Oven has broiler compartment, broiler pan, and bracket-type baking rack. There is also an indicating temperature control.

The "Jewel Box" has three surface burners which may be had in a variety of combinations. All may be eight-inch open or enclosed type, or two eight-inch and one six-inch. A unit cooker may also be substituted for the rear right burner.

G-E Introduces Five Vacuum Cleaners

BRIDGEPORT, Conn.—Features of the five new cleaners introduced by the merchandise department of General Electric Co., are streamlined styling, which facilitates cleaning of inaccessible corners, and a "Spot-Lite" which assists in cleaning darker locations.

Three of the new models—the "Super," the "Air-Flo," and the "Lite-Way" are motor-driven, brush-type cleaners. The fourth the "Special," is a straight-suction cleaner, and the fifth model, the "Tidy," is a "ceiling-to-floor" hand-type cleaner equipped with a deodorizer attachment.

In addition to the "Spot-Lite" feature, nozzle and handle adjustment and a new handle grip, found on the three motor-driven brush-type cleaners, the "Super" has a two-speed switch, which adapts the cleaner for use on both light and heavy rugs, and two convenient levers—one for raising or lowering the nozzle and the other for releasing the handle to lower it flush with the floor for cleaning under furniture. List price is \$76.50.

Distinctive feature of the "Air-Flo" are two foot-controlled levers for nozzle and handle adjustments, to facilitate changing from one type of work to another. It lists at \$59.50.

The narrow contour of the "Lite-Way" and its compactly designed, full-sized nozzle make it easy to reach into small places. By means of an adjustment screw, the nozzle may be set at the proper height for cleaning. This model weighs 13½ lbs. List price is \$39.95.

The "Special" is light in weight and easy to handle. It lists at \$19.95.

The "Tidy" is applicable to cleaning of upholstery, mattresses, stair carpets, automobile interiors, and clothing. It has a two-piece extension tube which enables the operator to reach all dirt from ceiling to floor. With blower tool attached, the "Tidy" can be used for blowing dust from behind radiators, for cleaning wicker furniture, and for fluffing pillows and fur pieces.

A glass dichloride container and two cans of dichloride crystals for repelling moths and removing unpleasant odors are included with its accessories. The list price, including all accessories, is \$17.95.

Owner of Old Range To Win New Model

TOLEDO—In exchange for the oldest Standard electric range in service in a user's home, Standard Electric Stove Co. will give the owner a Standard "Ohioan" model complete with all accessories. The company plans to use the old range for exhibition purposes.

Serial numbers of old ranges are to be secured by dealers and power companies among their customers. These numbers are to be sent to the company, where they will be checked with the serial number records at the factory. The offer is open until Dec. 31, 1934.

Worsham Will Address Refrigeration Men

SPRINGFIELD, Ill.—J. A. Worsham, author of "Low Pressure Selling," will make a tour of wholesale and retail refrigeration outlets this winter, lecturing on "Low Pressure Selling as Applied to Electric Refrigeration." After completing the tour, he will lecture in England. Mr. Worsham is a resident of Springfield.

PLANNING

RIGHT now is the time for planning activities for 1935. . . . This is the time for distributors to review their work of the past year and to make ready for 1935.

The right type of contract between "right" people means satisfactory business relations throughout, based on merchandise of proven quality, reasonable prices and protected territory. This is the type of contract written between Copeland and its distributors.

Copeland distributors have complete lines to sell. . . . Domestic and Commercial . . . each model is developed by an expert engineering and research staff and is, at all times, completely dependable.

Seven household models in Porcelain and Porcelainoid. Splendid line of Commercial Models for all purposes.

Write today for full details before completing your 1935 plans.

COPELAND REFRIGERATION CORP., Mount Clemens, Mich.
Division of Winslow-Baker-Meyering Corp.

Copeland
DEPENDABLE ELECTRIC REFRIGERATION

Kelvinator Constructs New 'Hot Room' For Testing

DETROIT — Kelvinator Corp. has opened a new "hot room" for checking the performance of its products at its Plymouth Road plant here.

The new testing chamber is designed principally for studying the reaction of refrigerators, water coolers and air-conditioning apparatus operating under excessive temperatures and other adverse conditions. The room is 35 ft. long and 17 ft. wide, and has dc. current, water and gauge positions that can accommodate a large number of units simultaneously. Heated by air forced into it through ducts leading from a fin coil, the laboratory can maintain desired temperatures without a variation of more than 1° F. plus or minus. Normally the interior is held at 110° F.

The entire laboratory, including the concrete slab floor, is mounted on steel springs to minimize vibration. In the construction of the walls and ceiling every possible effort has been made to curtail the passage of heat and noise.

Outside a one-inch jacket of acoustical tile is a celotex-lined air space approximately six inches in width, and surrounding this is a cinder block wall eight inches thick. Operating noises in the units under test are easily detectable, owing to the acoustical properties of the interior surfaces of the chamber.

The room is equipped with pressure-recording gauges, meters, time meters, recording thermostats, ammeters, watt meters, volt meters and all other devices needed for detailed checking of the performance of the units under observation.

In addition to this expansion of its "hot room" facilities, Kelvinator has completed a special humidity testing laboratory for studying "sweating" effects in cabinets.

Retail Code Authority Submits 1935 Budget For Administration

WASHINGTON, D. C.—Code Authority for the Retail Trade has made application to the National Industrial Recovery Board for the approval of its budget for, and of the basis of contribution by members of the trade to, the expense of administering the code for the period from Nov. 1 of this year to Oct. 31, 1935. Total amount of the budget for this period is \$949,860.

The assessment for the second code year, the application asserts, should be \$1 per employee—provided that 15 cents of each dollar should accrue to the National Retail Code Authority, Inc., for expenses of the national administration.

Copies of the budget are available upon request at the office of the National Recovery Administration, Room 3316, Department of Commerce building here or at the office of the National Retail Code Authority, 1006 Munsey building, here.

According to Richard Neustadt, managing director, it is impossible at the present time to give an exact budget for each of the local retail code authorities. The figure set, therefore, is submitted as the total budget for administering the general retail code by the National Code Authority and its local retail code authorities.

Ice Box Code Authority Proposes Amendment On Price Fixing

WASHINGTON, D. C.—Objections or suggestions concerning a proposed code amendment to strengthen prohibition of price discrimination between buyers of the same class in the household ice refrigerator industry must be filed here with NRA Deputy Administrator W. L. Schurz, before November 19, the NRA announced last week.

Sponsored by the industry's Code Authority, the proposal would add the following to Section 19 of the trade practice section:

"And in no case shall this provision be evaded or nullified by such devices as the appointment of a member or connection of a buying concern as salesman for a manufacturer so as to bring to the buyer the salesman's commission as well as the buyer's discount, thus giving such buyer an unfair advantage over other buyers of the same class."

Norge Dealer Sells 5 Boxes in First Day

CHENEY, Kan.—G. R. Shepherd of the Kansas Gas & Electric Co. here, sold five Norge refrigerators the day his company received its initial shipment. The town's population is 669.

Look Inside!

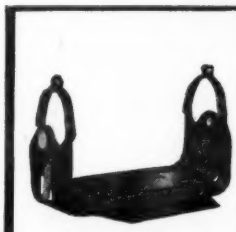
NEVER BEFORE HAS ONE MOTOR HAD SO MANY FEATURES THAT WILL HELP YOU SELL DOMESTIC REFRIGERATORS



Type KC capacitor-motor with stand base



Type KC capacitor-motor with automatic belt-tightener base



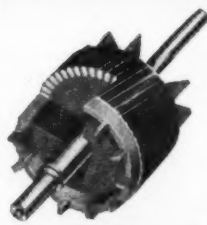
AUTOMATIC BELT-TIGHTENER BASE—depends on torque instead of springs for its action. Hence, it maintains the correct belt tension to prevent slippage of the belt. With this base, belt tension is automatically and evenly regulated to meet changes in load. The result: greatly reduced friction, which means: (1) longer life of belt, bearings, and seals; (2) quiet operation; and (3) lower operating costs.



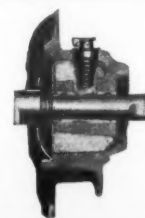
RESILIENT MOUNTING—"CUSHIONED POWER"—the 1935 Type KC capacitor-motor is mounted in large rings of springy, live rubber that are treated with a special G-E compound which makes them impervious to oil. These rubber rings fit snugly into machined recesses around each bearing housing. This construction isolates single-phase torque vibration and hence helps make this motor quiet.



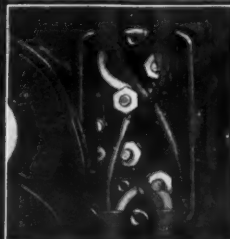
SPRING-STEEL END-PLAY SILENCERS—effectively cushion end bump at both ends, yet permit free movement of the rotor, thus assuring quiet operation without wear or power loss from added friction. Of durable spring-steel construction, these silencers will last the life of the motor.



CAST-ALUMINUM ROTOR—indestructible. Has permanent electrical characteristics and cannot become open-circuited. The entire squirrel cage is a one-piece solid-aluminum pressure casting, made by an exclusive G-E process.



ADVANCED BEARING DESIGN—long bearing life is assured by an unusually large oil supply and a scientifically designed recirculation system. Pure-wool-yarn packing filters the oil and feeds it to the bearings. Oil throwers and returns recirculate the oil. Thus, a constant supply of fresh, clean oil is assured at all times.



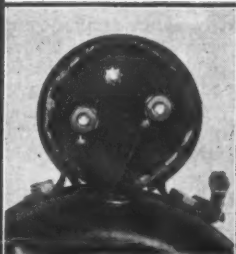
SIMPLIFIED CONNECTIONS SPEED ASSEMBLY—leads for line, cold-control, box-light, and light switch are all easily connected to posts provided in the built-in terminal box, without splicing or soldering. This speeds assembly and hence reduces costs.



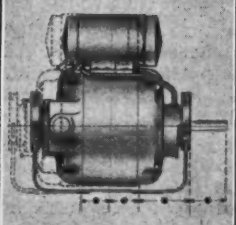
RELIABLE STARTING SWITCH—long-lived—positive-acting—rust-proof—quiet. Built to last the life of the motor. The reliability and long, "care-free" service life of this important unit have been proved by eight years of satisfactory service in the field.



EXCLUSIVE WINDING TREATMENT—will not soften under heat. Bonds the windings together and protects them from moisture, high temperature, and mechanical injury which might shorten motor life. This standard treatment makes the windings suitable for use even in the tropics.



CYLINDRICAL CAPACITOR—small in size, sheathed in steel—fully protected against injury—and fastened rigidly to the motor. Capacitor connections are entirely separate from line terminals, hence there is no opportunity for incorrect connection. (Cover removed in illustration to show accessibility.)



INTERCHANGEABILITY—mounting dimensions for 60 cycle and other commercial frequencies and for direct-current motors are identical. All ½-hp. to ¼-hp. resilient-mounted motors, with or without belt-tightener base, will fit the same base drilling. The same motor body will fit either the plain or the belt-tightener resilient base.

*Motor length may vary with the rating, but the mounting dimensions remain unchanged.

You should have complete information about the Type KC "carefree" capacitor-motor—the outstanding refrigerator motor of 1935. The nearest G-E office will be glad to work with you. And, to insure unit

responsibility for the electric equipment of your refrigerator, we suggest that you consider G-E cold-control units, and cable, along with the motor. General Electric, Dept. 6A-201, Schenectady, N. Y.

070-73

GENERAL ELECTRIC

PERSONALITIES

By George F. Taubeneck

Roamin' Vandals

"What? Stand around in line for hours just to be pushed and shoved around and have my toes stepped on by a mob of grimy tourists? Heh, heh. Not me. Little old yours truly is going to stay home tonight, put on his slippers, and be comfortable. Let somebody else get trampled."

That's what Chicagoans were saying to one another last Wednesday, on the final day of A Century of Progress exposition. Everybody knew that the grounds would be packed; nobody seemed to want to be in on the finish.

But somehow people began getting the itch, and quietly joined what seemed to be the rest of the world in the line-up at the gates. The first 10,000 were inside the gates in record time.

Bombs went off as each successive set of 10,000 tickets were sold, and they went so fast that the heavy booms of their explosions became fairly regular and monotonous.

Finally a multi-gun salute told the glad tidings that attendance at the Fair had reached 16,500,000 for the year—which meant that it was a financial success. Of the \$10,000,000 of 6 per cent guaranteed gold notes issued at the beginning, only \$583,000 remained unpaid. When that 16,500,000th admission was purchased, the Fair management was able to pay those notes off and have \$1,000,000 left over for dismantling the buildings and buttoning up the job completely.

The 1933 paid attendance was 22,565,839. Grand total for the two-year exposition was 39,052,236.

Quickly the news spread around

No American Legion convention—not even those of Detroit and Boston—could have compared with this unprecedented-in-modern-times example of unfettered pillage and destruction. It was all—or nearly all—good natured vandalism; but it was vandalism, just the same.

Worst sufferer was the Horticultural exhibit, which was literally torn limb from limb. Fat and placid women walked off with rare plants worth hundreds of dollars. It seemed that every female one encountered had an uprooted specimen of flora under an arm.

Signs were torn down with glee and abandon, as the crowds cheered particularly daring youths. The big idea for boys seemed to be that of getting a four-foot wooden letter to carry home.

Sally Rand pictures—big posters, oil paintings, and the like—were coveted prizes. So were such signs as "Public Telephone," "Ladies Toilet," and "Information." Young men by the score did the human fly stunt, shinnying up flimsy walls to capture a smudgy flag or faded banner.

A modern Paul Revere should have ridden down to the Colonial Village in advance of the mobs, and to the strains of the currently popular "Here Come the British," for that thoroughly delightful reproduction of early American architecture was battered in and collapsed as thoroughly as if it had been attacked by a trained army.

Similar scenes of ruin and pillage were enacted in almost all the other villages. Curiously enough, the Irish Village was relatively quiet and peaceful.

They Like Mountain Music



They brought their mountain music with them. L. R. Brooks (left) and C. T. Isley, two of the Southern Public Utilities Co. star salesmen, recently visited Kelvinator Corp.'s Detroit plant. S.P.U.C. sold 4,160 Kelvinators during its recent eight-weeks drive. Brooks is a native of Mooresboro, N. C.; Isley comes from Spartanburg, S. C.

Chicago. The citizens felt like celebrating. Their great venture had not only put the city back on its feet but had paid for itself! So they forgot their slippers and their apprehension of crowded discomfort, and helped swell the surge of humanity knocking at, and already within, the great Fair grounds.

Thousands upon thousands of motor cars inched along the boulevards, and sardined into parking lots. Good-humored multitudes stood first on one foot and then the other as they waited their chance to pass through the turnstiles, which were clicking like a battery of typewriters.

Human Battering Rams

At 8 o'clock that night a tumultuous and uncontrollable herd of humanity battered through the 18th St. gates. Down at the 23rd St. entrance the pressure was so great that hundreds were admitted free. Others climbed over the fence.

The marines were called out. So was an army detachment. City, park, and Fair police worked like mad, but were no match for 375,000 persons who finally got in, through, around, and over the gates.

Once inside, the mob spirit engulfed the staidest of housewives and the meekest counterparts of Caspar Milquetoast. It was Hallowe'en, you know (whoever decided to close the Fair on Hallowe'en is probably pretty sorry today), and people suddenly remembered—under the spell of the mob—that when they were kids they had torn down picket fences and soaped windows on that night.

Pomposity Unrequited

Over at the English Village brawls were started, but didn't get very far—chiefly because the gangs were cowed by the appearance of the Royal Guards—beef-trust men attired in feathered hats and buckled kneelength stockings, and carrying huge axes. Throughout the Fair people had tittered at these incongruous specimens; but they didn't laugh on that last night when the big boys brandished those axes.

Over in the Court of States the governor of Illinois, HENRY HORN-ER, the president of the Fair, RUFUS DAWES, and the mayor of Chicago, EDWARD KELLY, surrounded by wing-collared dignitaries, uniformed army and navy officers, and a negro choir, were uttering pompous-sounding words as they officially closed the Fair—supposedly forever.

At midnight Mrs. Dawes pressed a switch which turned off all the lights of the Fair for a moment—much to the surprise of oblivious revelers in other parts of the grounds. Back came the lights, again revealing that indescribably gorgeous nocturnal coloring which was the finest thing about the Fair, up went some tricky fireworks, and on went the pagan dance of the multitudes.

Down in the Streets of Paris, as one might have guessed in advance, the most excitement of all occurred. All the peep shows were running full blast at last; there was no irate Fair management or professionally shocked policewomen to worry about, for on the morrow everything was to be closed anyway. Barkers shouted:

"This is it, boys. No panties, no brassieres."

And the dimes rolled in as the good-natured suckers went through the gates, saw their nudes, and exited to the next show. Somewhat surprisingly, the exhibitionist girls were not molested; although some of them, frightened, ran home to mama—or whomever it may be that they run home to these days.

It was another story, however, in the restaurants within the Streets of Paris. Men got drunk, resented the push of crowds, threw fists and bottles. They bashed chairs and table tops over one another's heads. There wasn't a plate glass window left in the concession.

Battle of Paris

Shortly after midnight, when the Battle of Paris was raging the most fiercely (interfering cops had been hoisted over the walls by laughing and cheering crowds), the fire department arrived with a pretty big hose. That did the trick. It was about 40 above zero, and the powerful torrent of icy water sobered up the roistering melee.

From 1 o'clock on the excitement came in small doses. The big mob scenes were over, and only "bit players" were around to keep the crowds amused. About this time some bright boys got the notion of collecting water faucets, realization of which notion turned drinking fountains into spouting geysers.

On Swift bridge the boys who ran the puppet show advertising a brand of scouring powder got tired of their "sissy" act, and really put the puppets through some unorthodox paces. A goodly crowd collected here to watch the puppets and listen to the loud speaker spout forth really funny smoking car stories, lewd limericks, and unpurged barroom ballads.

Near the 23rd St. entrance a handsome young man had commandeered one of the weight-guessing platforms, and was doing a for-women-only business. If he guessed the woman's weight—and he always did, according to his two assistants—he kissed her. He had a rushing trade. Many women who had probably celebrated their thirtieth birthday several times came back to be weighed again and again. (Hope our pictures of this stunt turn out well.)

Fair employees—some half million people were working at one task or another during the course of the exposition—openly cried on one another's shoulders as they viewed the end of the enterprise to which they had devoted their working hours for two summers. For them it was a re-enactment of The Last Days of Pompeii.

The Greatest Show on Earth was over, and it had had a Garrison Finish.

Footnote: Next day Westinghouse Electric Supply Co., three large de-

partment stores, and 53 dealers advertised "Westinghouse refrigerators at savings up to \$118—World's Fair display models."

Interest from Italy

MUSSOLINI's campaign for more and better babies in Italy must be causing heads of big families to look around for proper means of refrigerating the vast quantities of food their offsprings are consuming.

We don't know this to be a fact, y'unnerstand, but we do have our reasons. Until recently we had few readers in Italy but all of a sudden-like, subscriptions to ELECTRIC REFRIGERATION NEWS have begun to roll in. Recently the following Italian firms have entered orders:

G. B. Boni,
La Refrigerazione Automatica

Moderna,
(Servel distributor)
Via Benedetto Marcello 18,
Milano, Italy.

Cav. Dott. Antonio Bacelli
Via Rasella 155,
Roma, Italy.

Ing. Bazzi & C.
Corso Magenta 32
Milano, Italy.

Schraemli & Forster
(Frigidaire distributor)
16, Via. A. Manzoni,
Milano, Italy.

Fratelli Tortorelli
Siena, Italy.

Alberto Fantini & Co.,
Via Giovanni Da Milano
Milano, Italy.

Ing. Gioacchino Cavicchioli
Via Vanchiglia 36
Torino, Italy.

Applicazioni Industriali Del Freddo,
Viale Monte Grappa 15,
Treviso, Italy.

S.A.T.I.T.
(Societa Anonima Sviluppo Applicazioni Tecniche Industriali—Universal Cooler distributor)
Via Arsenale 12,
Torino, Italy.

Incidentally, the subscription department received orders during the past week from these foreign firms:

Therma Electric Heating Mfg. Co.,
Schwanden, Switzerland.

Hong Kong Brewers & Distillers Ltd.,
Rutton Buildings, 7 Duddell St.,
Hong Kong, China.

N. V. Technisch, Bureau Maryen,
Waldorp straat 52, The Hague, Holland.

E. T. Chepou, Frigidaire, Ltd., 46 Rue
De La Boetie, Paris, France.

S.I.A.M. de Tella, Ltd.,
Avda. de Mayo, 1302,
Buenos Aires, Argentina.

Thomas Ths. Sabroe & Co.,
Postbox 186, Aarhus, Denmark.

E. Rifa Anglada,
Paseo de Gracia, Barcelona, Spain.

A. E. L. Duchateau,
Brent Crescent, North Circular Road,
London, N. W. 10, England.

He Hears How Good the 'News' Is



W. M. Barber, sales manager of Perfection Stove Co., manufacturer of Superfex oil-burning refrigerators, listens to a selling presentation from Howard Mateer, advertising manager of Electric Refrigeration News.

Messrs. H. J. Stranack & Co., Ltd.,
P. O. Box 914,
Durban, Natal, South Africa.
Hubard & Boulton,
Apartado Postal 1194,
Mexico City, Mexico.

A. J. Waugh,
Ho Hong Bank Bldg., 86 Beach St.,
Penang, Straits Settlements.

Cia Centrale de Construction,
Haine St. Pierre, Belgium.

Societe Electra,
57 Rue Blaise Pascal,
Casablanca, Morocco.

Technical Bookstore,
Ingenieurhaus Sia,
Prague, Czechoslovakia.

International Radio Co.,
254 Castlereagh St.,
Sydney, N. S. W., Australia.

Firth Pty. Ltd.,
Box 1776, G.P.O.,
Melbourne, Australia.

Herman Mayer,
Laxenburgerstrasse 36,
Vienna, Austria.

Alfred Teves,
Frankfurt, Germany.

From Bureau Chairman To Golf 'Pro'

Although for some mysterious reason he insists on remaining unidentified, the Head Man of one of the more important refrigeration manufacturers informs us that JAMES E. DAVIDSON, president of the Nebraska Power Co., and onetime president of the old N.E.L.A., hasn't retired to a monastic cell since resigning as president of the Electric Refrigeration Bureau.

He has, among other things, been polishing up his golf game.

The nameless Head Man sends us a clipping from the front page of the Omaha World-Herald's Morning Sport Section to prove it. Here's the story, as reported by the Omaha sports editor:

DAVIDSON WINS FROM PRO, MAY LEAVE AMATEUR FOLD
Extra! J. E. Davidson will turn pro!

Well, to be a bit more specific, he isn't quite sure yet but he has a good notion to quit the ranks of the simon pures for all time.

The reason is the 35-38-73 he shot at the Country club Wednesday, a score so much better than his previous record that we won't even mention the difference. What's more, Marty Walsh, the club pro, was playing in the foursome and he had to take second place with a 75.

The other two witnesses—Mr. Davidson made them sign the card and swear to it before a notary public—were George Durkee, who had 83, and E. A. Baird, who had 88.

Mr. Davidson is giving lessons by appointment only.

'What? You Don't Tell Me, Chris!'



Chris Steenstrup (left), designer of the famous G-E Monitor Top, apparently shocks Walter Daily (right), advertising manager of the General Electric specialty appliance department, with a story about something or other. These candid camera photographs were taken by the editor of Electric Refrigeration News.

Frigidaire Announces New Members of B.T.U. Club

DAYTON—Another group of Frigidaire selling men and dealers have qualified during the last 30 days for the 1934 B.T.U. Quota club, Frank R. Pierce, sales manager for Frigidaire Corp., announced last week.

Membership in the club is based on attaining personal or dealership selling quotas assigned for the 12-month period.

The new members are: Akron district—J. L. Kirk, Cuyahoga Falls, Ohio; R. K. Heller, Akron; A. M. Morris, Akron.

Albany district—W. E. Lounsbury, Oak Hill, N. Y.; Chas. Adriance, Albany, N. Y.; Bradner's, Cobleskill, N. Y.; R. R. Snow, Greenwich, N. Y.; W. M. Whitney & Co., Albany, N. Y. Baltimore-Washington district—E. J. Brosseau, Washington, D. C.; C. F. Rector, Washington, D. C.; R. P. Fox, Washington, D. C.

Chattanooga district—G. V. Kuykendall and G. D. Lynch, Chattanooga; C. C. Lotspeich, Jr., Nashville, Tenn.; J. R. Cherry, Harriman, Tenn.; H. V. Hodges, Livingston, Tenn.; J. W. McMillan, Carthage, Tenn.; C. A. Harmon, Rockwood, Tenn.

Dayton district—Bowling Green Maytag Co., Bowling Green, Ky.; W. G. McKeddie, Van Wert, Ohio; Rice Sales & Service, Dayton; The Rike Kumlir Co., Dayton; Henry Porter & Co., Allen, Ky.; D. H. Wyatt, Columbus, Ohio; I. H. Goodman, Cincinnati; E. W. Willock, Campbellsville, Ky.

El Paso district—G. H. Johnson, Kingman, Ariz.

Fort Worth district—H. A. Dubey, Dallas, Tex.; O. W. Aston, Sherman, Tex.; H. R. Castles, Quanah, Tex.; F. F. Seifert, Abilene, Tex.; T. W. McKoy, Childress, Tex.; Sidney Claiborne, Lubbock, Tex.; West Texas Utilities Co. Dist. "E," Quanah, Tex.; West Texas Utilities Co. Dist. "J," Childress, Tex.; W. Crow, Ft. Worth, Tex.; R. N. Lunn, Olney, Tex.; E. W. Caperton, Border, Tex.; S. C. Hagy, Shreveport, La.; J. V. Rogers, Wichita Falls, Tex.; B. H. Vickery, Wichita Falls, Tex.; S. B. Anderson, Lubbock, Tex.; C. A. Spragin, Jr., & Co., Wichita Falls, Tex.; G. O. Griffiths, Electra, Tex.; Bert Curry, Pampa, Tex.

Houston district—C. F. Adickes, Huntsville, Tex.; H. C. Hafer, Brenham, Tex.; W. H. Johnston, Lufkin, Tex.; R. C. Reed, Beaumont, Tex.; Robischung-Kiesling, Inc., Houston, Tex.; V. C. Sherafino, Beaumont, Tex.; W. W. Short, Houston, Tex.; F. S. Taylor, Bay City, Tex.; H. F. Twombly, Houston, Tex.

New Jersey district—Frank Bozzelli, Patterson, N. J.; F. B. Mullen, Elizabeth, N. J.; Geo. Brooks & Co., Inc., Somerville, N. J.

New Orleans district—Eddie Bernstein, New Orleans; Sidney Levy, Jr., New Orleans; C. J. Gleber, Jr., New Orleans; L. C. Gregory, Baton Rouge, La.; A. C. Toups, New Orleans.

Norfolk district—E. W. Cheshire, Norfolk, Va.

Oakland district—J. W. Quintell, Sacramento, Calif.; R. C. Garrett, Red Bluff, Calif.; W. H. Baker, Oakland; P. W. Sansom, Oakland; G. M. Cross, Corcoran, Calif.; Exeter Mercantile Co., Exeter, Calif.; Joe Leahy, San Francisco; F. P. Vivas, San Francisco; P. W. Butler, San Francisco; F. W. Heckman, Exeter, Calif.; Lustig Furniture & Hardware Co., Hayward, Calif.; J. C. Bitters, Fresno, Calif.; L. W. Pritchard, Oakland; W. G. Roll, Oakland.

Seattle district—C. H. Messer, Seattle.

TVA Deal for Knoxville Power Falls Through as Time Limit Expires

(Concluded from Page 1, Column 1) state supreme court on a technicality. Application was renewed Oct. 29, and was granted and upheld on appeal. Tennessee's supreme court on Oct. 30 held that the objectors were entitled to be heard and the case reviewed in February, 1935. On the following day the time limit on the agreement of the sale expired.

One of several things can now happen with respect to the Knoxville power supply.

The city might build its own distribution system and buy electricity from the TVA. But its credit might or might not stand a bond issue for the purpose. The PWA at one time offered to lend it money to build such a system, but this was withdrawn when the TVA negotiated the purchase of the equipment already in existence and owned by the utility company. That offer might be renewed by the PWA.

The TVA has the authority and the money to build its own distributing system in Knoxville, if it so desires.

The Tennessee Public Service Co. would probably face ruin if a new competing plant were built. Indications are that it is willing to consent to the extension or renewal of the agreement pending the outcome of a test of the constitutionality of TVA's rights and powers.

Distributors' Product Managers Visit G-E Plants

CLEVELAND—Ten product managers from G-E distributorships recently made a tour of various General Electric plants, the tour being an award for their meritorious work in supervising installation and service of G-E refrigerators.

The trip began Oct. 29 with an inspection of the company's plant at Ft. Wayne, Ind., and from there the party went to Nela Park, Cleveland, headquarters of the General Electric specialty appliance sales department. W. C. Noll, manager of the electric refrigeration product division, led the group.

Next stop was at Erie, Pa., for a tour through the G-E manufacturing plants in that city, and on Nov. 1, the men arrived in Schenectady for a visit at the factory and the House of Magic.

In the evening, the product managers were guests at a banquet attended by 200 representative G-E workers and several of the company's executives. Among the latter were W. R. Burrows, vice president in charge of manufacturing; and Christian Steenstrup, chief engineer of the G-E refrigerator department. Speeches were made by Messrs. Noll and Steenstrup, and by A. M. Sweeney, sales manager of the refrigeration department.

The 10 product managers making the trip were:

L. G. Hines, Hines Co., Baltimore; L. A. Moore, G-E Supply Corp., Salt Lake City; W. D. Trawick, E. Pulver Cook, Inc., Providence; C. H. Miller, O'Bannon Brothers, Little Rock; J. A. Jardine, W. L. Thompson, Inc., Boston; W. A. Ropes, P. H. Harrison & Co., Newark; C. M. Odorizzi, R. Cooper Jr., Inc., Chicago; D. Matthews, Perry-Browne, Inc., Columbia, S. C.; Roy Murdock, A. Wayne Merriam, Schenectady; W. C. Holliday, George Belsey Co., Ltd., Los Angeles.

Westinghouse Elects 3 Vice Presidents

EAST PITTSBURGH—Following a recent meeting of the board of Westinghouse Electric & Mfg. Co., President F. A. Merrick announced election of three vice presidents, Roscoe Seybold, formerly comptroller; William G. Marshall, formerly assistant to vice president; and Ralph Kelly, formerly director of budgets. Their headquarters will be in East Pittsburgh.

From 1909 to 1922 Mr. Seybold was manager of the price section of Westinghouse' power and railway departments. In 1922 he was appointed manager of price statistics and assistant to the general sales manager.

In 1926 he became assistant to the vice president and general manager, advancing with that officer as his assistant when he became president of the company in 1929. On Oct. 28, 1931, he was appointed comptroller.

Mr. Marshall in 1929 left public utility personnel work to join the Westinghouse company as assistant to vice president in charge of industrial relations and various allied activities.

Mr. Kelly joined Westinghouse as a design engineer upon his graduation from Harvard university in 1909. During the World War he served with credit as a lieutenant in the U. S. Navy.

After the Armistice, he returned to Westinghouse and assumed the office of manager of the southwestern district and later manager of the central district. From this he was transferred to headquarters at East Pittsburgh as director of budgets, which office he held at the time of his election to a vice presidency.

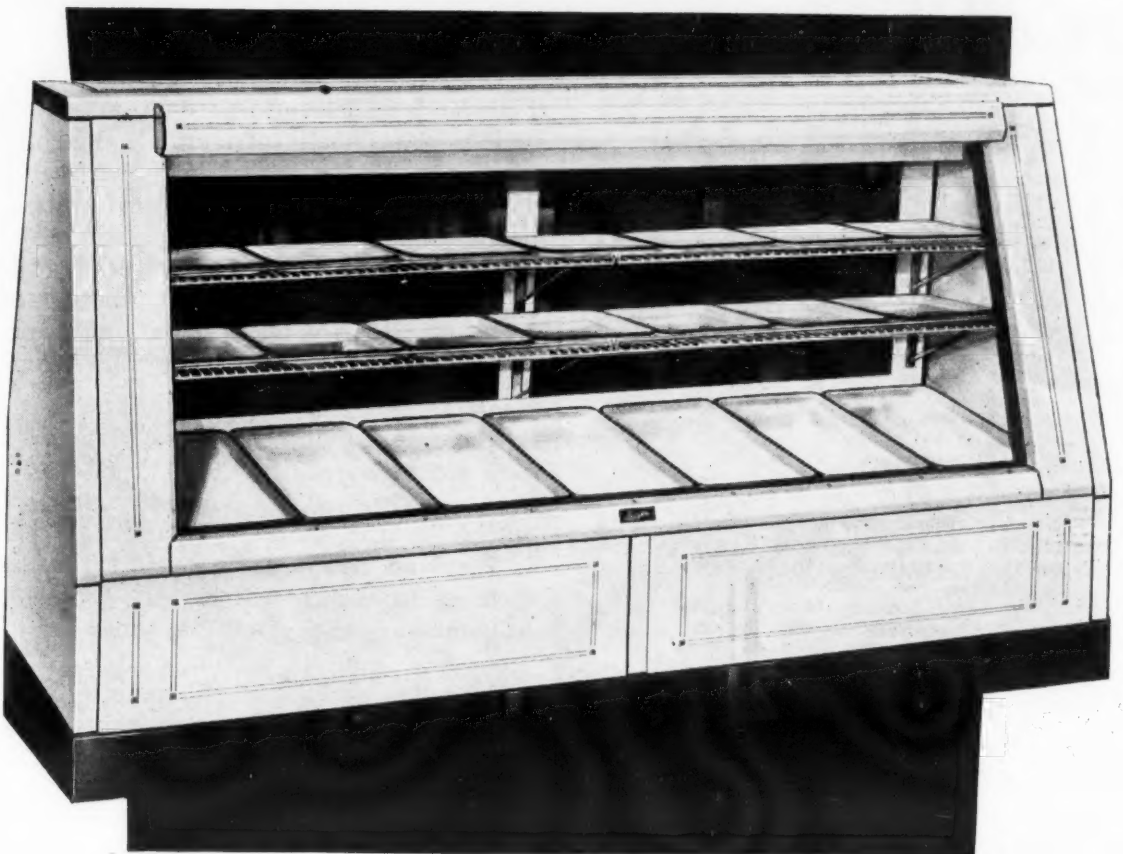
Pacific Gas & Electric Offers Half Rate On Extra Power

SAN FRANCISCO—As an inducement to its customers, both in homes and commercial establishments to use more electricity for lighting or operating appliances, the Pacific Gas and Electric Co. is offering a reduction of one-half the regular rate for all extra electricity consumed.

This announcement was made Oct. 22 by P. M. Downing, vice president and general manager of the utility. The new rate, he said, will go into effect following December meter readings and will be in operation for one year.

The reduction will operate as follows: a customer who had an electric bill of \$3 last January but through the use of additional electrical equipment has increased his use of power so that his bill at regular rates would be \$6, will receive a \$1.50 reduction.

"We have at present a large volume of surplus power," Downing said. "We want to dispose of it on a basis that will be advantageous to the customer and equitable to the company."



"THAT'S TELLING 'EM"

Below is the copy of an ad which 132,963 Food Merchants will receive in November, 1934.

Authorities Agree!

Read these excerpts from letters of Famous Food Authorities (Photostat copy of complete letters on request.)

"The 'Seeger Cabinet' furnished by your company was beautiful and furnished a most appropriate setting for the cheese display therein. Its appearance was only secondary to its efficiency. The cheese showed practically no dehydration during the ten-day display period, and was removed at the conclusion of the fair in perfect condition."

"Your cases are so constructed that they provide an unobstructed view of the meat on the inside. You will be interested to know that no difficulty was encountered in keeping the meat at a uniform temperature throughout the week. Outside temperatures fluctuated from 55° to 90°, while the temperature inside the case did not vary 2° during the week."

Series Five All-Service Display Case—a New Display Case by Seeger, allows 33 1/3% more food display—and has all the modern, essential improvements desired by progressive merchants. Series Five display Case has been built on the requirements of thousands of Food Merchants—specifically and expertly built to create more sales, and greater profits.

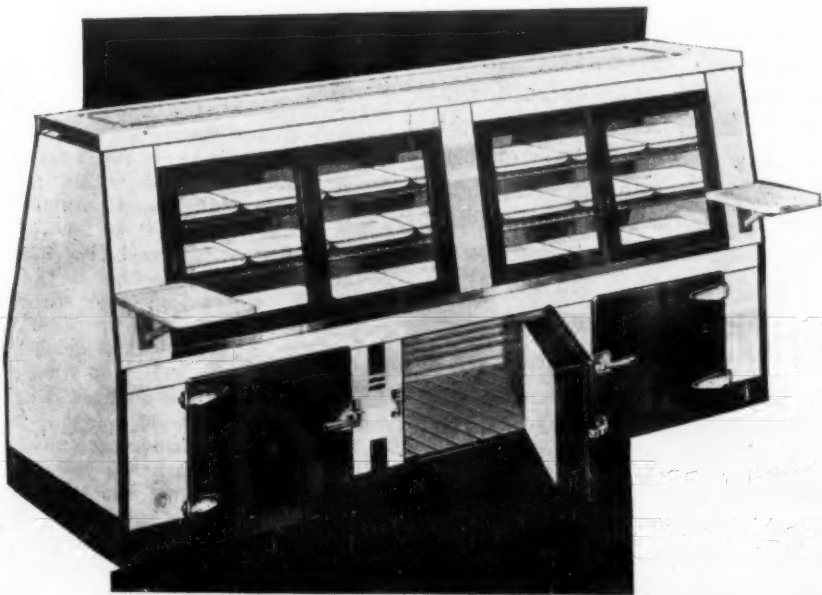
See your Electrical Refrigeration Dealer—or write for Literature on Display Cases and Commercial Cabinets.

SEEGER REFRIGERATOR COMPANY
SAINT PAUL, MINNESOTA

New York, N. Y.—Los Angeles, Calif.—Chicago, Ill.—Philadelphia, Pa.
Buffalo, N. Y.—San Francisco, Calif.—Boston, Mass.

BY
Seeger

SAINT PAUL



ELECTRIC REFRIGERATION NEWS

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VOL. 13, No. 10, SERIAL No. 294, NOVEMBER 7, 1934

Refrigeration Becoming A Stabilized Industry

GREATLY encouraged was the president of one of the largest manufacturers of refrigerator parts last week when he looked over the figures of his company for October. It was not only the best October in the history of the firm; it exceeded—both in sales and in production—any previous October by *three times*.

"Just how do you account for this remarkable increase in sales of supplies to manufacturers of electric refrigerators at a time when these latter manufacturers are finding their business practically at a standstill?" this man was asked. "Are electric refrigerator makers kidding us when they say that sales have dropped off precipitately this fall?"

"No," was his answer, "our sales to these manufacturers have no relation whatsoever to their retail sales at the present moment. They are building for next year, laying up a backlog of refrigerators for storage in warehouses, so that they won't be caught short next season as they were last. Four of our biggest customers were so swamped with orders last spring that each of them lost thousands of sales because they couldn't make deliveries. They don't intend to permit a situation like that to be repeated in 1935.

"For us this is a marked step forward. Our production facilities are generally strained to the breaking point during a few months of the year, and then are left idle for the remainder. For the refrigeration industry to level out its production curve in this manner is most encouraging. It will not only permit us to give better and more prompt service, but should help bring down the costs."

Inasmuch as the parts manufacturer quoted above supplies a plurality of the nation's electric refrigeration manufacturers, his observation regarding this phenomenon of manufacturing far in advance of the market demand should be taken as an indication of a major trend in the industry. And well it may be not only a major trend, but a major advance, in the electric refrigeration business; for the spreading of the production curve is a definite and recognizable sign of industry stabilization and maturity.

Last year some of the larger manufacturers stocked up a few thousand refrigerators in the fall and winter because they were afraid that labor troubles might close or impede their factories when spring came. Their apprehensions as to strikes and union squabbles failed to materialize; but they all found it was decidedly fortunate that they had refrigerators warehoused, for an unprecedented demand for their products arose as suddenly as a squall at sea.

Not so worried about the possibility of walkouts in 1935, leading manufacturers are nevertheless proceeding to fill all available warehouses again this fall. One of the largest is even building a mammoth new warehouse. Two have unusually large inventories; and instead of being disturbed over this normally alarming situation, are secretly congratulating themselves

over their readiness for whatever may come this spring.

One reason manufacturers are able to get their 1935 models into production so early this year is that small refrigeration machine engineering is so far advanced. Practically all of the leading makes now have refrigerating mechanisms so nearly foolproof and satisfactory that there is no clamor from either field or home office for changes. In fact, distributors are insisting, in many cases, that not even minor changes be made in machines this year.

Cabinets, of course, are subject to restyling. It would appear, however, that changes in style may not be so radical in 1935 as they were in 1934 and 1933. Many manufacturers will use practically the same tools and dies next year as they did this year in their cabinet making. Changes in design will be largely restricted to refinements, and possibly the wider use of colors, it is said in engineering inner circles. Moreover, the smaller boxes—which are still the biggest sellers—are made as economically as possible, and hence are not so susceptible to style changes as the larger models, on which there is more latitude for competition on appearance. Hence it is now relatively easy for a manufacturer to stock his warehouses with the smaller, cheaper models of his line; leaving the manufacture of the larger boxes to a later date when the state of market demand may be determined with better accuracy.

Stabilization of product makes for stabilization of an industry; and stabilization of an industry frequently means more economical manufacturing and selling. If sales managers can only succeed now in spreading demand throughout the year as production men are spreading their manufacturing operations, the entire industry could certainly operate more comfortably, and possibly more profitably, as well.

WHAT OTHERS SAY

TVA Utopia

FROM its inception the Government's development of the Tennessee Valley has been associated with Utopian visions. Abundance of electrical energy was to bring great industrial enterprises. Subsistence homesteads were to spring up on all sides and poverty and want were to be abolished.

But spreading the gospel of electric flatirons and washing machines could not satisfy the aspiration of those in charge of the Tennessee Valley Authority. The Tennessee Valley under the new dispensation provided an ideal setting for restoration of all the conditions of the Garden of Eden. All it lacked was the Adams and Eves living happily in Paradise Regained.

So now Arthur E. Morgan, chairman of TVA, comes forward with the world's most idealistic program. "We are considering," said he, "the development of eugenic babies in the Tennessee River Valley. This can be done by building a model college and town which will accommodate and educate 5,000 young men and women."

The proposal is to enroll "sincere young couples" who desire to wed; give the bride-to-be training in home economics and the duties of motherhood, and the prospective bridegrooms instruction in the responsibilities of an ideal husband and father.

"At the end of four years," says Mr. Morgan, "they will be ready for marriage."

But what a lot of opportunities there are for young people to change their minds during a four-year college course! At that, maybe it will work. At least no one will say that such a scheme is not well intended.—*Detroit News*.

A New Industry

THE Fedders Mfg. Co., Inc., which manufactures automobile radiators and other products, is going into the air-conditioning business as an important sideline.

Air conditioning is the mechanical process by which it is possible to keep your home or office at a warm, even temperature in winter and at a cool, even temperature in summer. You encountered it this last summer when you entered one of the movie theaters that advertise, "20 degrees cooler inside."

Air conditioning is not exactly new but it has been mechanically perfected within the last few years. It is one of those industries to which economists have looked for a lift that will get us out of the depression just as structural steel, automobiles, and radios have lifted the country out of depressions in the past.

Home owners long ago threw out the parlor "base burner" and installed furnaces for central heating. If a few million of them should decide within the next year or two that the time has come when they can afford to keep cool in summer as well as warm in winter a lot of unemployed men would be going back to work.

There are two kinds of manufacturing concerns. One is typified by the horse collar plant that went bankrupt when the auto came in, the other by that firm that anticipates changing conditions, changing styles, and new popular conveniences and governs itself accordingly. The Fedders company evidently belongs to the latter group.—*Buffalo Times*.

LETTERS

Another View of the TVA

4115 Buell Drive, Ft. Wayne, Ind.
Editor:

I cannot help but admire your straight forwardness in giving your opinion on TVA and EH&FA in your last editorial.

I agree with you that their activities are likely to demoralize existing selling organizations and plans as they are today in that territory.

Anybody, however, that has been through this territory can very readily testify that there are many thousands of families whose incomes are far below any possibility of buying appliances from existing selling organizations.

These people are American citizens and have just as much potential abilities and desires as any of the rest of us if given an opportunity to get and hold what they want.

To the best of my knowledge there has never been any private enterprise that has endeavored to lift them from their present state of poverty.

Undoubtedly there are going to be some private enterprises that will suffer from this development but it is far better to give them a temporary setback than to continue indefinitely the existing conditions of want and desire formed in the average family of this locality.

Also I would like to express another thought along this line. Why not develop the markets of this kind found in various parts of our country and quit fanning international hatreds so much in fighting for foreign trade?

If you will look into the future and forget your present prejudices I believe you will agree with me from a business standpoint if from no other. Under your paragraph of possibilities of further injustice to be wreaked upon other groups by the culmination of TVA activities I cannot see your point at all.

If you will go back 20 years or so ago you will remember that the cities were calling away countless thousands of independent families from rural districts by bright promises of easy money and a job as long as they wanted to work.

We all know how miserably these promises have failed. These families are now at the mercy of industrial leaders and if they do not provide work for them they must either starve or accept public charity.

This is emphatically wrong and if these people are not again given the opportunity to become permanently at least partially independent through developments such as TVA. Heaven only knows what the next 25 years will bring.

J. K. MARQUARDT.

TVA Editorial Commended

Ludwig Hommel & Co.
600-620 Second Ave., Pittsburgh, Pa.
Editor:

You have written an admirable editorial published in the Oct. 31 number of your paper. No matter how sympathetic one may be with the sincere and able efforts of President Roosevelt, there seems to be no justification for this governmental competition in the refrigeration business.

L. HOMMEL.

Government Interference

Uron Industries, Inc.
1223 West Sixth St., Cleveland
Editor:

The writer desires to compliment you upon your logical and sensible stand upon the danger and damage from the government interference with the refrigerator industry. It is bad enough to introduce such Socialistic ventures into public utility lines, but to destroy an industry in this fashion, it is simply criminal.

We were not aware that the President or our government had any mandate to use such destructive methods in trying to correct the unfortunate condition in which this country exists at the present time.

C. EDSON, General Mgr.

Information on Service

Wholesale Radio Service Co.
100 Sixth Ave., New York City
Editor:

We are the largest radio mail order house in the world and have just recently gone into the electrical refrigeration replacement parts business.

Aside from the usual business reasons for our entering this new field, we have done so because we feel that the radio service man is extremely well equipped both in training and experience to enter this new field.

However, at the same time, we believe that the average radio service man will find helpful a booklet possibly reprinting articles that have already appeared in *ELECTRIC REFRIGERATION NEWS* either giving general

hints as to servicing refrigerators or selling their services, etc.

I believe that many such articles have appeared in *ELECTRIC REFRIGERATION NEWS* and would greatly appreciate your advising if anything has appeared of this nature or any other similar matter that you think would be of interest to those just entering the refrigerator repair business.

H. R. LEVINGER.

Answer: *ELECTRIC REFRIGERATION NEWS* has been giving increased attention to all phases of the service problem in its editorial columns. A series of articles on the servicing of "orphan" makes of equipment has been published in recent months. We are holding this type matter and, after further editing, plan to publish it in book form.

So far, we have not made a definite announcement regarding this book and will probably not attempt to complete this job until we have turned out the 1935 edition of the *REFRIGERATION DIRECTORY AND MARKET DATA BOOK*.

We therefore have no books available at present and would suggest that you purchase back issues of *ELECTRIC REFRIGERATION NEWS* containing these service articles.

Likes Directory Service

Liberty Refrigeration Corp.
237 Georgia Ave., Providence, R. I.
Editor:

In response to your letter of Oct. 22, we are enclosing questionnaire with revisions incorporated for the free listing in the 1935 *DIRECTORY*.

We are also forwarding under separate cover literature and catalog pertinent to our line to date.

Expressing our appreciation at this time for the type of service your publication has given us and the industry as a whole, and thanking your officers for their courtesy and cooperation, may we wish you every success in publishing a bigger and better *DIRECTORY* for 1935.

L. SHEERAN, Supt.

Norge Engineers' Names

Norge Corp.
670 E. Woodbridge, Detroit, Mich.
Editor:

Your reporter who covered the recent trip of the local chapter of the A.S.R.E. through the Goebel plant must have been exhausted from climbing up and down so many stairs or partaken too liberally of those refreshments the Goebel company had on hand.

Everybody in the chapter should know Earl Hubacker by this time, but I do not believe I ever met Edward.

E. T. Morton is one of the newer members of our staff, but Mr. Maton is a total stranger.

Roy Nelson, whose initials are R. G. by the way, had only regrets the next day because he was unable to attend.

Oh, yes, I was there too, Mr. Editor.

J. C. BUCHANAN, Engineering Dept.

Answer: Sorry, Mr. Buchanan. If you gentlemen would just be kind enough to sign the register provided for that purpose, and (note to Mr. E. T. Morton) sign it legibly, there would be no difficulty in keeping the record straight.

Group Subscriptions

Refrigeration Research Institute
Chicago, Ill.
Editor:

We are just organizing a club consisting of refrigerator service men to better themselves in refrigeration and air conditioning. Can you assist us in getting publications on refrigeration and air conditioning?

We have a membership of more than 65 men at this writing.

J. A. NASMAN, Librarian.

Answer: We suggest that your members subscribe to *ELECTRIC REFRIGERATION NEWS* taking advantage of the reduced rates for group orders. The rate for 5 or more subscriptions, each—\$2.75 per year; 10 or more, each—\$2.50 per year; 20 or more, each—\$2.25 per year; 50 or more, each—\$2.00 per year. Check must be sent with order.

Back Issues & Reprints

Kansas City Power & Light Co.
Kansas City, Mo.
Editor:

What would be the cost of 10 or 15 copies of any back issues of *ELECTRIC REFRIGERATION NEWS*? If we should decide to have 10 or 15 copies of reprints, say two pages in length, what would be the cost of that?

DAISY DAVISON, Librarian.

Answer: Back issues may be had at a cost of 10 cents each by addressing the subscription department, which will fill all orders except those for issues which are out of stock.

Reprints cannot be furnished except where orders are entered immediately after the issue is published and before the type forms are broken up. However, a "clipped copy file" is maintained and if you will send us a list of articles in which you are interested, we will be glad to furnish clipped pages insofar as they are available.

HOME SERVICE

New Plans for Home Service Proposed at G-E Conference

CLEVELAND — Home economists from all sections of the country, representing food manufacturers, magazines, newspapers, public utilities and General Electric distributors, attended the Fourth Annual Home Service conference at General Electric's Kitchen Institute, Nela Park, here, October 25 and 26.

The program for the conference was planned and directed by Edwina Nolan, director of G-E home service department.

A number of woman editors of national prominence participated in the conference. "When You Read a Magazine" was discussed by Sarah Field Splint, *McCall's Magazine*; Josephine Wylie, *Better Homes and Gardens*; Nell B. Nichols, *Woman's Home Companion*; and Alice Blinn, *Ladies Home Journal*.

The program included talks by A. M. Sweeney, sales manager; M. R. Poteat, range division manager; C. M. Snyder, dishwasher division manager; Victor Civkin, director of kitchen planning; Frank Corliss, commercial division; W. M. Timmerman, manager of commercial engineering division; H. Freeman Barnes, sales promotion manager, lamp department; and Dr. Matthew Luckiesh, director of lighting research laboratories, General Electric Co.

Kitchen Planning Contest

Three new plans inaugurated by the G-E home service department were introduced at the conference. These included a competition, sponsored by General Electric Institute and open to dealers, distributors, utilities and department stores, for proper arrangement of kitchen equipment; a home service plan for department stores; and a cooperative home service plan for educational institutions.

Prizes to be given in the kitchen planning includes a first prize of \$20, a second prize of \$10, and four mentions of \$5 each.

In the problem the contestant is to arrange G-E kitchen equipment. The contestant is to assume that the family consists of husband, wife and three children, the family having an income of \$3,000 and living in a \$9,000 home.

Department Store Objectives

Objectives of the home service plan for department stores are as follows: (1) promote the use of electrical appliances; (2) increase floor traffic in the department; (3) establish this department to the people of the community as a place of authority for all electrical appliances.

Methods for keeping a department store kitchen "active" were outlined in the following manner:

Advertise cooking schools to the public, user's day, distribution of the menu service, cooking schools for "little women"; women's club meetings, a day for home economics departments of high schools.

With respect to the cooking school, it is declared that if a tea room is in connection with the store's appliance department, the school should start at 2 p. m. to take advantage of the tea room patrons. A menu for the day should always be prepared and the school should last for about 1½ hours.

The menu for the day and the special recipe should be mimeographed and given to each customer. Some recipes from the company's standard recipe book can be used but recipe books should be sold. Cards should be distributed to each woman attending in order to make up a prospect list.

Cooking School for Girls

The cooking school for "little women" is designed to interest girls between the ages of 8 and 14 years. A series of six lessons on elementary cooking has been planned, the course to be given on Saturday mornings. A "cake baking" contest is suggested as the "final examination" in this school.

A novelty in the form of a "bachelor" cooking school was also suggested at the conference. It should be advertised as a school where foods in which men are particularly interested will be cooked.

One of the members of the G-E home service department reported that a department store electrical appliance department had recently conducted a cookie baking contest with considerable success. The cooperation of a shortening manufacturer was solicited, and home economics classes throughout the city were asked to participate.

Rules of the contest were that the participant baked the cookies herself; that the advertised shortening and flour were used, and that only one

batch of cookies could be entered by one person. The cookies were brought to the appliance department for judging, were then displayed in the department, and later sent to charities and hospitals.

G-E's cooperative educational plan for colleges is designed to educate the students in the use of modern electrical appliances. Two types of plans have been arranged, one being a cooperative setup offered to junior or graduate students of home economics from reputable colleges, and the other being a plan to contact schools with home economics departments, educating both staff and students on the use of new kitchen appliances.

There is a decided lack of knowledge in colleges regarding electrical appliances, declared the G-E home service head. The Department of the Interior of the United States has sent G-E the names and locations of 119 colleges with recognized home economics departments. This list is classified into five groups. They are:

- Group I—State Universities.
- Group II—Women's Colleges.
- Group III—Teachers Colleges.
- Group IV—Normal Schools.
- Group V—Endowed or Private Institutions.

The classification of colleges is an important factor in formulating an active, comprehensive and educational program. All State universities have home economics departments. The strongest and most active departments are located in the middle west. This is due to the fact that these colleges are land grant colleges from the state and agricultural schools predominate. There are very few endowed or private women's colleges with home economics departments.

To Give Equipment Course

Plan No. 1 is a plan to have junior or graduate students of home economics come to the Institute at Cleveland and take the modern kitchen equipment course. This plan was used this summer with Cornell University and Western Reserve.

Objectives of this plan are to offer home economics students an opportunity to study the subject of home economics from a commercial viewpoint, to put home economics women who have had experience in closer touch with opportunities for employment in the commercial field, and to educate these women to the uses of G-E equipment.

At the close of the semester a given number of graduates or undergraduates are selected by the college staff and sent to the Institute at Nela Park. A course in modern kitchen equipment is given for five days.

The course includes: the use of the range, refrigerator, and dishwasher; kitchen planning; training courses for the salesmen, the product men and the employee; cooking schools for the user and the prospect; presenting home calls; presenting the all-electric kitchen.

Promote Sale of Appliances

Plan No. 2 is designed to promote the sale and use of appliances in university and college laboratories. Just recently, colleges and universities have realized the need for a course in electrical equipment.

Many colleges have equipped their laboratories with new electrical appliances but do not teach or advocate the proper method of using these appliances. It is obvious that an electrical manufacturer must have a promotional program of this kind.

A plan to reach colleges and universities will serve two objectives: stimulate interest and sales of appliances; educate home economics staff and students on the uses of appliances.

Following are a few suggestions for a plan to follow:

1. Select five colleges (each college should be representative of its group).
2. Contact the head of the home economics department and have her arrange a meeting with the staff of the university and present the story.
3. Install all-electric kitchen in the laboratory. (This would include range, refrigerator and dishwasher.)
4. Conduct a school for the staff.
5. Conduct a school for the students. The other divisions of the company should cooperate by installing laundry equipment and small appliances.

This equipment should be sold to the colleges and not given away.

A definite payment plan and discount should be allowed universities. Their budget, as a rule, is limited but if one college is supplied free of charge it will be necessary to take this step with all colleges.

Modern Appliances Used in Rex Cole Cafeteria



Management of Rex Cole, Inc., New York G-E distributor, practices what it preaches by using General Electric ranges, dishwashers, and refrigerators in the cafeteria it maintains for use by Cole employees at lunch time.

The distributor should participate because it will mean more future sales for his organization. It is also a wonderful chance for publicity.

A project of this kind will be invaluable to the G-E company inasmuch as it will be the first real move on a manufacturers part to cooper-

ate with universities in an educational way. It is valuable advertising because many of these students will enter the business world and naturally would recommend the equipment they are most familiar with.

For example: A student at Iowa State College, Ames, Iowa, where Gen-

eral Electric refrigerators are used, accepted a position at Morell Packing Co. (a national packing house in Iowa).

It was her first job to equip a kitchen and she chose General Electric. This concern is located in a town that is 100 per cent Frigidaire.

A good reputation can be maintained only by continuance of good performance. Universal Cooler's reputation for dependability extends back over ten years. And Universal Cooler has so shaped its manufacturing policies that its reputation will remain carefully safeguarded always.



UNIVERSAL COOLER CORPORATION
DETROIT, MICHIGAN BRANTFORD, ONTARIO

MANUFACTURERS OF A COMPLETE LINE OF HOUSEHOLD AND COMMERCIAL REFRIGERATION EQUIPMENT

AIR CONDITIONING SPECIFICATIONS

Self-Contained Conditioners

Frigidaire

Frigidaire Corp., Dayton, Ohio.

Self-contained air conditioners (compressor in base). Model SCV-66 has a fresh air connection for a window. Model SCVH-66 also has the fresh air connection, and has heating coils and a humidifier.

Model No.	SC-38	SC-75	SCV-66	SCVH-66
Dimensions (Overall)				
Height (in.)	42 1/2	42 1/2	30 1/2	30 1/2
Width (in.)	26 1/2	30	62	62
Depth (in.)	19 1/2	23 1/2	20 1/2	20 1/2
Compressor				
No. of cylinders	2	2	2	2
Bore (in.)	1 1/4	1 1/4	1 1/4	1 1/4
Stroke (in.)	1-7/16	2 1/2	2 1/2	2 1/2
Compressor speed (r.p.m.)	630	450	450	450
Size of motor (hp.)	1/2	1	1	1
Normal refrigerant charge (lbs.)	6	8	8	8
Blower				
Blower speed (r.p.m.)	1120	800	800	1730
Size of blower motor (hp.)	1/100	1/30	1/30	1/30
Total circulation (c.f.m.)	300	adj., 300 to 400	adj., 300 to 400	adj., 300 to 400
Weight, net (lbs.)	360	450	500	500
Total shipping weight (lbs.)	452	616	828	828
Suggested installed price	\$335	\$525	\$631	\$687

Functions Performed

Models SC-38, SC-75, and SCV-66—cooling, circulating, and dehumidifying. Model SCVH-66—cooling, heating, circulating, dehumidifying, and humidifying.

Compressor

Make of compressor.....Frigidaire
Make of compressor motor.....Delco
Is high pressure safety cut-out provided.....Yes
Type of compressor control.....Pressure

Refrigerant

Refrigerant used.....Freon
Type of refrigerant control.....Thermostatic expansion valve

Cabinet

Finish of cabinet.....SC-38 and SC-75—Grained walnut; others—Buff

Blower

Type of blower.....Model SC-38—Screw-type, trailing blades; others—double centrifugal

Air Circulating System

Location of air intake.....Back
Location of air discharge.....Top
Fresh air intake provision.....On models SCV-66 and SCVH-66
Type of discharge grille.....Adjustable

Surfaces

Make of cooling coil.....Frigidaire cross-fin
Cooling coil tubing.....Copper
Cooling coil fins.....Aluminum

Humidifying and Cleaning

Type of humidifier.....Pan-type

Controls

Liquid line solenoid valve; thermostat (as accessory); SCVH-66 has a modulating thermostatic steam valve.

General Electric

General Electric Co., Schenectady, N. Y.

Self-contained room air conditioners, with compressor in base. Outside air connection provided.

Model No.	FR-1	FC-1
Dimensions (Overall)		
Height (in.)	39 1/4	37 1/4
Width (in.)	63	41 1/2
Depth (in.)	14 1/2	13 1/2
Compressor		
No. of cylinders	2	2
Bore (in.)	2	2
Stroke (in.)	2 1/2	1 1/2
Compressor speed (r.p.m.)	390	400
Size of motor (hp.)	1	1 1/2
Normal refrigerant charge (lbs.)	5 1/2	3 1/2
Blower		
Diameter of wheel (in.)	6	7
Blower speed (r.p.m.)	820	1400
Size blower motor (hp.)	1/60	1/60
Total circulation (c.f.m.)	200	200
Maximum fresh air intake (%)	37 1/2	37 1/2
Surfaces		
Area of cooling surfaces (sq. ft.)	46	29.8
Area of heating surfaces (sq. ft.)	15	15
Refrigeration Capacity (B.t.u./hr.)		
(With 80° F. condensing water, and air entering with 80° F. dry bulb temperature at 50% relative humidity. Refrigerant temperature of model FR-1 is 28° F. and of model FC-1 is 32° F.)	3200	1850
Sensible cooling	5050	2800
Total capacity	8250	4650

Heating Capacity (B.t.u.'s per hour with 2-lb. steam).....12400

Humidification Capacity

Lbs. of water per hour.....1.8

Weight, net (lbs.).....576 368
Total shipping weight (lbs.).....743 414
List Price, f.o.b. factory.....\$625 \$400

Functions Performed

Model FR-1—cooling, heating, humidifying, circulating, dehumidifying, cleaning and circulating. Model FC-1—cooling, dehumidifying, and circulating.

Compressor

Make of compressor.....G-E
Make of compressor motor.....G-E
Type of compressor motor.....Model FR-1—G-E; Model FC-1—G-E
Make and type of motor starter.....G-E
Is high safety cut-out provided.....Yes, by condenser pressure
Type of compressor control.....Pressure

Refrigerant

Refrigerant used.....Freon
Type of refrigerant control.....Thermostatic expansion valve

Cabinet

Make of cabinet.....G-E
Finish of cabinet.....Walnut

Blower

Type of blower.....Model FR-1—two double-inlet multivane; Model FC-1—G-E propeller type

Make of blower motor.....G-E
Type of blower motor.....Model FR-1—G-E; Model FC-1—G-E
Type of blower motor.....Model FR-1—G-E; Model FC-1—G-E
Type of blower motor.....Model FR-1—G-E; Model FC-1—G-E

Air Circulating System

Location of air intake.....End
Location of air discharge.....Model FR-1—front; Model FC-1—top
Fresh air intake provision.....Model FR-1—yes; Model FC-1—no
Make and type of discharge grille.....Model FR-1—G-E louvered; Model FC-1—fin-and-bar type

Surfaces

Cooling coil tubing.....Copper dipped in solder

Cooling coil fins.....Copper

Heating coil tubing.....Copper dipped

Heating coil fins.....Copper

Humidifying and Cleaning

Type of humidifier.....Open pan

Type of filter.....Dry—"adhesive impingement" type

Controls

Water regulating valve standard on both models. Thermostat and humidistat optional on model FR-1.

ACE HARD RUBBER SLIDING DOORS

WITH ROLLER BEARINGS

For Refrigerated Display Cabinets, Doors, Door Frames, Side Rails, Jambes, Glazing Strips, Trim. Standard and special sizes. Catalogue No. 4500 on request.

The illustration shows the roller bearing feature of Ace Hard Rubber sliding doors.

AMERICAN HARD RUBBER COMPANY

11 MERCER STREET, NEW YORK, N. Y.

Akron, Ohio—111 West Washington St., Chicago, Ill.

Remote Floor-Type Conditioners

General Electric

General Electric Co., Schenectady, N. Y.

AD models perform year-round functions and have outside air connection. AG models are room coolers only, performing cooling, dehumidifying, and circulating, without fresh air connection.

Model No.	AD-3	AD-4	AG-1	AG-2
Dimensions (Overall)				
Height (in.)	39 1/4	39 1/4	31 1/2	31 1/2
Width (in.)	33 1/2	50 1/2	31	31
Depth (in.)	14 1/2	14 1/2	17 1/2	17 1/2
Blower				
Diameter of wheel (in.)	6	6	10	10
Blower speed (r.p.m.)	820	820	900	900
Size of blower motor (hp.)	1/60	1/30	1/100	1/100
Total circulation (c.f.m.)				
Maximum fresh air intake (%)	20	450	475	475
Surfaces				
Area of cooling surfaces (sq. ft.)	43	78	40	80
Area of heating surfaces (sq. ft.)	15	29.2	15	15
Refrigeration Capacity (B.t.u./hr.) (With 80° F. entering air at 50% relative humidity, and an evaporator temperature of 32° F.)				
Dehumidification	2650	5200	2750	5500
Sensible cooling	4450	9800	4650	9300
Total capacity	7100	15000	7400	14800
Heating Capacity (B.t.u.'s per hour with 2-lb. steam)				
12400	22700			
Humidification Capacity				
Lbs. of water per hour	1.8	3		
Weight, net (lbs.)				
Total shipping weight (lbs.)	213	298	67	83
273	372	114	130	
List Price, f.o.b. factory				
\$295	\$385	\$175	\$200	

* 60 cycles or d.c. † 50 cycles.

Functions Performed

Models AD-3 and AD-4—Cooling, dehumidifying, heating, humidifying, cleaning, and circulating. Models AG-1 and AG-2—cooling, dehumidifying and circulating.

Refrigerant

Refrigerant used.....Freon or cold water (all ratings for Freon)

Type of refrigerant control.....Thermostatic expansion valve

Make of cabinet.....G-E

Finish of cabinet.....Walnut

Blower

Type of blower.....Model AD-3—two double-inlet multivane; Model AD-4—four double-inlet multivane; others—propeller type

Make of blower motor.....G-E

Type of blower motor.....AD models—G-E; AG models—G-E

capacitor or d.c. tapped series; AG models—G-E

resistance split-phase or d.c. compound

Air Circulating System

Location of air intake.....Model AD-3—right end; others—both ends

Location of air discharge.....Models AD-3 and AD-4—front; others—top

Fresh air intake provision.....Models AD-3 and AD-4—yes; others—no

Make and type of discharge grille.....Models AD-3 and AD-4—G-E louvered; others—G-E turning vane type

Surfaces

Cooling coil tubing.....Copper dipped in solder

Cooling coil fins.....Copper

Heating coil tubing.....Copper dipped in solder

Heating coil fins.....Copper

Humidifying and Cleaning

Type of humidifier.....Open pan

Type of filter.....Dry—"adhesive impingement" type

Controls

Thermostat, humidistat and liquid line solenoid valve—all optional.

Frigidaire

Frigidaire Corp., Dayton, Ohio.

Remote floor-type cabinets. Models RV-66 and RVH-66 with an outside air connection, and models RVH-66, H-4, and V-4 with heating coils. Has refrigerant heat interchanger.

Model No.	RV66	RVH66	H3	H4	V3	V4
Dimensions (Overall)						
Height (in.)	30 1/2	30 1/2	31 1/2	31 1/2	43 1/2	43 1/2
Width (in.)	62	62	39 1/2	39 1/2	28 1/2	28 1/2
Depth (in.)	20 1/2	20 1/2	14	14	14	14
Blower						
Blower speed (r.p.m.)	800	800	1/20	1/20	1/20	1/20
Size of blower motor (hp.)	1/30	1/30	400	400	340	340
Total circulation (c.f.m.)	300 to 400, adj.	400	400	400	340	340
Weight, net (lbs.)						
Total shipping weight (lbs.)	530	500	200	244	231	261
	530	828	310	324	313	342
Suggested installed price						
	\$421	\$486.50	\$242.50	\$296.50	\$185.50	\$289.50

Functions Performed

Cooling, dehumidifying, and circulating. Models RVH66, H4, and V4 have also heating.

Refrigerant

Refrigerant used.....Freon

Type of refrigerant control.....Thermostatic expansion valve

Cabinet

Finish of cabinet.....H and V models—Burled walnut lacquer; R models—Buff

Blower

Type of blower.....Double centrifugal

Type of blower.....Double centrifugal

Type of blower.....Double centrifugal

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Type of blower.....Double centrifugal

Type of blower.....Double centrifugal

Air-Conditioning Specifications

Supplementing last week's presentation of specifications of 148 air conditioners made by 19 manufacturers, Electric Refrigeration News publishes on pages 10 and 12 specifications on Frigidaire, General Electric, Nesbitt, and Trane air-conditioning equipment which were received during the current week. Data on additional equipment will be published as received.

Nesbitt

John J. Nesbitt, Inc.

Philadelphia, Pa.

Floor-type air-conditioning unit for remote installation of compressor. Units designed for either direct expansion or cold water. Nesbitt also makes special duct-type units handling up to 600 cu. ft. of air per minute.

Model No.	HC400	H600	HC800
Dimensions (Overall)			
Height (in.)	34	36	36
Width (in.)	36	46	56
Depth (in.)	14	14	14

Blower

AIR CONDITIONING

Need for Humidification of Air Explained in Mitchell's Booklet

NEW YORK CITY — A piece of consumer sales literature so exhaustive that it is virtually a treatise on the need for winter humidification has been issued by the Mitchell Fin Humidifier Co., 400 Madison Ave., New York. It touches on several aspects of the dry-air evil, but bases its principal sales attack on the common cold.

No modest envelope stuffer, this. It is portfolio size, and the text in its 23 pages, while brief, is set in type of such commanding proportions that every word grabs attention. These features, plus the thoroughness of its presentation, make this promotion piece one of the most effective so far produced in the humidifier field.

Opening with the query, "What did colds cost you last year?" the brochure declares that "the common cold exacts \$2,000,000,000 yearly toll in the United States alone." And still another sheet advises that the reader "lessen susceptibility to colds simply and inexpensively through proper home humidification."

Calling water the key to vigorous health and joyous living, the piece goes on to say that blood is 90 per cent water and the human body two-thirds water. Water is being continuously evaporated from the body. Over a million perspiration glands assist in this, and make it vital that we replenish the supply frequently, it explains.

Here the copy makes another advance toward the real meat of its subject, humidification, by stating that

"the drinking of water is not the only requisite. We must breathe it."

"Air is thirsty for water. The relation between air and its moisture content is known as relative humidity. Air is dry when its relative humidity is low. That is, when it is thirsty for water. Air in most homes . . . during the winter has a relative humidity even lower than that of Death Valley Desert (23 per cent)."

Thirsty air destroys life, it asserts, then describes concisely our respiratory organs, emphasizing the fact that the latter are constantly awash with moisture and that they must be kept so. It points out that there are 725,000,000 air sacs in the lungs, and that the air we breathe is dissolved in the moisture in our lungs and transformed into blood.

Now comes a double-page, double-deck streamer shouting that "humidification is vitally important to health," followed by assertions that there are fewer than 5,000 homes in the U. S. having correct humidification, that the human body can adapt itself to dry air, but only at the cost of weakened resistance to germs of colds and other respiratory ailments. Further, that 30 per cent of the coal purchased each winter for home heating is wasted through over-heating.

Not overlooked is the beauty-preservation appeal. "The charm of soft skin, the glory of luxurious hair—these are nature's gifts to every woman. It is pathetic to reflect on

the havoc wrought by dry, thirsty air on these most cherished possessions."

Doctors agree, it is stated, that . . . "the relative humidity of indoor air should average between 40 and 50 per cent. The average home requires the evaporation of from three to 10 or more gals. of water per day during the heating season."

Then comes a two-page spread on the Mitchell Fin Humidifier — first mention made of it. The equipment is not described, but a drawing shows how it is installed on a steam radiator, the water pan being underneath, with large fins extending up between the radiator's sections. Three short paragraphs tell simply what the Mitchell will do.

Next page pictures a nicely appointed living room. Beneath the picture appear these statements: "This living room is 13 ft. wide, 20 ft. long, and 9 ft. high. Its cubic content is 2,340 cu. ft. At 0° F. the air of this room can hold water to the extent of 1/4 pt., equal to 1/4 glassful. At 69° F. the same air can hold water to the extent of two pints, equal to four glassfuls. Thus, cold damp air becomes dry on heating because its original moisture content only partially satisfies its new, increased moisture capacity."

Reproduced in the book is a chart

Moisture Capacity of Air	
Temperature of the Air	Grains Maximum Content of Moisture in One Cubic Foot of Air
-20 degrees	.219
-10 degrees	.356
0 degrees	.450
5 degrees	.560
10 degrees	.673
15 degrees	.790
20 degrees	.921
25 degrees	1.061
30 degrees	1.211
32 (freezing)	1.266
35 degrees	1.321
40 degrees	1.476
45 degrees	1.611
50 degrees	1.756
55 degrees	1.891
60 degrees	2.036
65 degrees	2.181
70 degrees	2.326
72 degrees	2.381
75 degrees	2.436
80 degrees	2.581
85 degrees	2.726

Relative Humidity of Air

Dry Bulb		Difference Between Dry and Wet Bulb Thermometer Readings (Degrees F.)																					
		Relative Humidity (Per Cent)																					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
50	93	87	81	74	68	62	56	50	44	39	33	28	22	17	12	5	...	...	...	...	...	...	...
52	94	88	81	75	69	63	58	52	46	41	36	30	25	20	15	9	4	...	...	...	...	...	...
54	94	88	82	76	70	65	59	54	48	43	38	33	28	23	18	12	8	3	...	...	...	...	...
56	94	88	82	77	71	66	61	55	50	45	40	35	31	26	21	16	11	7	2	...	...	...	...
58	94	89	83	77	72	67	62	57	52	47	42	38	33	28	24	19	15	10	6	1	...	...	...
60	94	89	84	78	73	68	63	58	53	49	44	40	35	31	27	22	17	14	9	5	...	...	...
62	94	89	84	79	74	69	64	60	55	50	46	41	37	33	29	24	20	16	12	8	...	...	...
64	95	90	85	79	75	70	66	61	56	52	48	43	39	35	31	26	22	18	15	11	...	...	...
66	95	90	85	80	76	71	66	62	58	53	49	45	41	37	33	29	26	22	18	15	...	...	...
68	95	90	85	81	76	72	67	63	59	55	51	47	43	39	35	31	28	24	21	17	...	...	...
70	95	90	86	81	77	72	68	64	60	56	52	48	44	40	37	33	30	26	23	20	...	...	...
72	95	91	86	82	78	73	69	65	61	57	53	49	46	42	39	35	32	28	25	22	...	...	...
74	95	91	86	82	78	74	70	66	62	58	54	51	47	44	40	37	34	30	27	24	...	...	...
76	96	91	87	83	78	74	70	67	63	59	55	52	48	45	42	38	34	31	28	25	...	...	...
78	96	91	87	83	79	75	71	67	64	60	57	53	50	46	43	39	36	33	30	27	...	...	...
80	96	91	87	83	79	76	72	68	64	61	57	54	51	47	44	41	38	35	32	29	...	...	...

from U. S. Public Health Service Report No. 1,214, showing the great upswing during the winter season in the frequency of diseases of the respiratory system.

More technical than any other part of this piece are the next two pages, which explain what relative humidity is, and how to find it. They state that the ideal atmosphere is 68° F. with a 45 per cent relative humidity.

Also published are a chart showing the relative humidity in an area when the dry and wet bulb readings are known, and a table showing the moisture capacity of air at various temperatures.

Rounding out the contents are statements from 17 authorities on the need for winter humidification, and a page of answers to questions frequently asked about humidifying, such as, "Are radiator pans adequate?"

Only one page is given to discussion of the Mitchell equipment itself. It states that the humidifiers are made in 16, 20, 24, and 29-in. lengths, and depths of 1 1/2 in. and 2 1/2 in.

Prices for the humidifier, according to size are: 16-in. length with seven fins, \$11; 20-in. with eight fins, \$12; 24-in. with 10 fins, \$14; and 29-in. with 12 fins, \$16.

Brine System Used in Cooling Offices

CHICAGO—Offices of the Visking Corp., 6800 W. 65th St. here, have been provided with a comfort-cooling system by the Narowetz Heating & Ventilating Co., local agent for Auditorium air-conditioning systems. An existing circulating brine system was utilized, so that the installation of additional mechanical refrigeration was unnecessary, according to the installers.

The new equipment was furnished by the American Blower Co., with Johnson air controls. August Carron & Sons were the general contractors.

Coal Co. Offices Cooled By Westinghouse

CHICAGO—In the yard office of the Mariott Coal Co. of this city, the mid-day sun of last summer made conditions unbearable for the workers. When windows were opened, coal dust soon covered books and papers.

A cooling system with Westinghouse equipment was installed to alleviate this condition.

LIQUIDATION SALE

of GRIGSBY-GRUNOW CO., INC.

makers of *Majestic* RADIOS, TUBES REFRIGERATORS

By Order of the UNITED STATES DISTRICT COURT

PURSUANT to an order of the United States District Court, the Trustee in Bankruptcy of the Grigsby-Grunow Company, Inc., offers for sale all of the machinery, equipment, inventory, good will, patents, trade marks and trade names of the Grigsby-Grunow Company, Inc., as well as real estate and buildings used in the manufacture of MAJESTIC radios, tubes and refrigerators.

The machinery consists of the very finest makes of all types of metal and wood working machinery, also a completely equipped tube, enameling and plating plant, all of which are in immediate operating condition.

The inventory consists of made-up parts, parts in process and raw materials for radios, refrigerators and radio tubes. The Service Department on all three items has been kept intact.

The GOOD WILL consists of the name

"MAJESTIC" as applied to radios, refrigerators and tubes, which name has been extensively advertised throughout the world, and which is secured by copyrights in practically every country throughout the world including many other trade names, patents and copyrights.

The real estate consists of factory buildings having a floor area of approximately 950,000 square feet, suitable for any type of manufacturing.

The Trustee is authorized to sell at public or private sale, and is now prepared to receive offers for any part or parcels of the assets, which offer if satisfactory will be approved.

Competent salesmen will be in attendance at the plant, 5801 Dickens Avenue, Chicago, Illinois, at all times, and an early investigation of the property is solicited.



REFRIGERATION SERVICE DEPARTMENT

The Trustee, under order of the Court, has set up a Refrigeration Service Department, to maintain service and to sell service parts. This will maintain the name and prestige of "Majestic" and be an asset of major importance to anyone buying the "good will" of the company.

SERVICE PARTS FOR RADIOS

There is on hand a considerable quantity of service parts for radios which are staple merchandise and are being sold to the users of the millions of Majestic radios now in service.

A COMPLETE CATALOG

Is available to any prospective buyer on request to Mr. Frank M. McKey, Trustee in Bankruptcy, Grigsby-Grunow Company, Inc., 5801 Dickens Avenue, Chicago, Illinois.

SPECIFICATIONS

Suspended-Type Conditioners

Trane

The Trane Co., LaCrosse, Wis.

Overhead suspension type comfort coolers for direct expansion of refrigerant. Also available for cold water or brine.

Model No.	12-2	15-2	18-2	21-2	24-2	26-2	28-2	30-2	32-2	34-2	36-2	38-2	40-2
Dimensions (Overall)	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE
Height (in.)	16 1/2	20	23	26	29 1/2	33 1/2	37 1/2	41 1/2	45 1/2	49 1/2	53 1/2	57 1/2	61 1/2
Width (in.)	17	20	23	26	29 1/2	33 1/2	37 1/2	41 1/2	45 1/2	49 1/2	53 1/2	57 1/2	61 1/2
Depth (in.)	18 1/2	21	24	27	30 1/2	34 1/2	38 1/2	42 1/2	46 1/2	50 1/2	54 1/2	58 1/2	62 1/2
Blower													
Blower speed (r.p.m.)	1140	850	850	850	850	850	850	850	850	850	850	850	850
Size of blower motor (hp.)	1/20	1/10	1/10	1/10	1/10	1/10	1/8	1/8	1/8	1/2	1/2	1/2	1/2
Total circulation (c.f.m.)	410	820	1280	1650	2020	2400	2780	3160	3540	3920	4300	4680	5060
Refrigeration Capacity (B.t.u./hr.) with 80° F. entering air at 55 per cent relative humidity, and a refrigerant temperature of 40° F.	9800	16000	24000	31400	39000	46800	54600	62400	70200	78000	85800	93600	101400
Total capacity	9800	16000	24000	31400	39000	46800	54600	62400	70200	78000	85800	93600	101400
Weight													
Total shipping (lbs.)	115	175	215	250	300	370	430	490	550	610	670	730	790

General Electric

General Electric Co., Schenectady, N. Y.

Overhead suspension type room coolers for wall or ceiling mounting.

Model No.	AG-4	AG-12	AG-14
Dimensions (Overall)			
Height (in.)	24 1/2	22	22
Width (in.)	29 1/2	38	38
Depth (in.)	16 1/2	24	24
Blower			
Diameter of wheel (in.)	10	14	14
Blower speed (r.p.m.)	800*	860*	860*
Size of blower motor (hp.)	1/20	1/20	1/20
Total circulation (c.f.m.)	475*	1200	1200
Surfaces			
Area of cooling surfaces (sq. ft.)	80	122	276
Refrigeration Capacity (B.t.u./hr.) (With 80° F. entering air at 50% relative humidity, and a 32° F. refrigerant temperature.)	5500	9900	11200
Dehumidification	9300	20100	26300
Sensible cooling	9300	20100	26300
Total capacity	14800	30000	37500
Weight			
Net weight (lbs.)	89	218	219
Total shipping (lbs.)	136	252	253
List Price			
F.o.b. factory	\$195	\$320	\$370

*60 cycle a.c. or d.c. 150 cycles.

Functions Performed

Cooling, dehumidifying and circulating.

Refrigerant

Type of refrigerant control...Thermostatic expansion valve

Cabinet

Make of cabinet...G-E

Finish of cabinet...Model AG-4—walnut; others—dark grey

Blower

Type of blower...Propeller

Make of motor...G-E

Type of blower motor...a.c. resistance split-phase or d.c. compound

Air Circulating System

Location of air intake...Model AG-4—ends; others—rear

Location of air discharge...Front

Fresh air intake provision...Model AG-4—no; others—optional

Make and type of discharge grille...Model AG-4—G-E turning vane type; others—G-E fan guard type

Cooling coil tubing...Copper dipped in solder, all but AG-14, which is bare copper

Cooling coil fins...Copper

Controls

Thermostat and liquid line solenoid valve, optional.

Functions Performed

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Functions Performed

STATISTICS

SALES of 13 Manufacturers to Dealers Drop to 42,120 Units During September, 1934

The following 13 member companies of the Refrigeration Division of the National Electrical Manufacturers Association (Nema) reported sales for September, 1934: Crosley Radio Corp., Frigidaire Corp., General Electric Co., Gibson Electric Refrigerator Corp., Kelvinator Corp., Leonard Refrigerator Co., Norge Corp., Servel, Inc., Stewart-Warner Corp., Sunbeam Electric Mfg. Co., Uniflow Mfg. Co., Universal Cooler Corp., and Westinghouse Electric & Mfg. Co. Member companies not reporting included: Apex Elec. & Mfg. Co., Jomoco, Inc., Merchant & Evans Co., and Sparks-Withington Co. The sales of the reporting companies do, however, include units manufactured by the following concerns: Major Appliance Corp., Montgomery Ward & Co., Potter Refrigerator Corp., Sears, Roebuck & Co., and Truscon Steel Co.

HOUSEHOLD		Domestic Sales		Canadian Sales		Other Foreign Sales	
Lacquer (Exterior)	Cabinets with Systems	Quantity	Value	Quantity	Value	Quantity	Value
Under 3.00 cubic feet..	3,202	\$ 168,143	92	\$ 4,556	1,766	\$ 91,677	
1. 3 to 3.99 cubic feet..	271	14,524	152	9,881	175	10,567	
2. 4 to 4.99 cubic feet..	6,614	439,708	152	2,293	2,293	154,939	
3. 5 to 5.99 cubic feet..	4,908	384,010	83	6,885	1,132	90,142	
4. 6 to 6.99 cubic feet..	2,362	224,194	68	6,064	453	40,601	
5. 7 to 7.99 cubic feet..	3,856	445,047	39	4,624	535	59,335	
6. 8 to 8.99 cubic feet..	490	57,847	13	1,462	96	11,630	
7. 10 to 12.99 cubic feet..	48	10,514	1	196	2	430	
8. 13 to 24.00 cubic feet..	21	5,087	1	226	2	491	
9. Total Lacquer	21,472	1,749,674	265	24,782	6,454	459,812	
Porcelain (Exterior)							
Cabinets with Systems							
10. Under 4.99 cubic feet..	724	60,535	1	88	151	13,001	
11. 5 to 5.99 cubic feet..	353	29,745	6	624	110	10,016	
12. 6 to 6.99 cubic feet..	1,370	157,574	12	1,396	105	12,691	
13. 7 to 7.99 cubic feet..	1,965	240,735	6	795	174	20,912	
14. 8 to 8.99 cubic feet..	1,075	160,730	7	1,005	100	15,373	
15. 10 to 12.99 cubic feet..	301	54,675	2	366	45	7,876	
16. 13 to 24.00 cubic feet..	257	58,465	2	449	36	9,079	
17. Total Porcelain	6,000	762,459	36	4,721	721	69,348	
18. Total Lines 9 and 17....	27,472	2,511,533	301	29,503	7,175	549,160	
19. Separate Systems	5,961	242,574			613	26,768	
20. Separate Household Low Sides	235	4,283	38	496	325	5,295	
21. Total Lines 18, 19, 20....	33,668		339		8,113		
22. High Sides, 1/4 hp. or Less	284	16,011	6	349	171	9,356	
23. Cabinets—No Systems....	46	4,111			3	330	
24. Total Household		2,778,512		33,348		590,909	
COMMERCIAL							
25. Water Coolers with High Sides	1,027	109,847	9	946	54	5,386	
26. Water Coolers with No High Sides....	52	2,838	1	55	8	467	
27. Ice Cream Cabinets with High Sides....	154	22,230	3	436	42	5,473	
28. Ice Cream Cabinets with No High Sides....	139	17,473	5	482	31	3,319	
29. Beverage Coolers with High Sides	340	24,775	2	132	5	330	
30. Beverage Coolers with No High Sides....	122	8,170	12	1,837	2	130	
31. Room Coolers with High Sides	18	4,412			46	9,935	
32. Room Coolers with No High Sides....	26	3,636			7	912	
Extra High Sides							
33. 1/4 to 1/2 hp. Incl....	1,694	145,925	51	4,400	651	51,476	
34. Above 1/2 to 1 hp. Incl....	850	104,273	26	3,322	280	32,631	
35. Above 1 to 5 hp. Incl....	451	85,383	16	3,289	75	13,918	
36. Above 5 to 10 hp. Incl....	51	15,279					
37. Above 10 hp.	8	3,325					
38. Total Lines 33, 34, 35, 36, and 37	3,054		93		1,006		
39. Total Lines 25, 27, 29, 31, and 38	4,593		107		1,153		
40. Extra Commercial Low Sides	3,045	96,829	87	3,513	603	25,315	
41. Miscellaneous Cases and Cabinets	49	12,905	15	1,301	6	1,581	
42. Total Commercial		657,300		19,763		150,873	
43. Totals—Household and Commercial		\$3,435,812		\$50,111		\$741,782	

Ferro Enamel Organizes Export Division

CLEVELAND—Ferro Enamel Corp. has formed an export division to market Ferro products in foreign countries not reached by Ferro subsidiaries in Canada, England, France, and Holland.

Offices of the new division will be in Ottawa, Canada, and the operations will be under the direction of C. D. Clawson of the Ferro Enamel Corp. of Cleveland, and W. Mavor, managing director of the Ferro Enameling Co., Ltd., of Ottawa.

G-E Profit Larger than Same Period in 1933

SCHENECTADY—General Electric Co. for the three months ending Sept. 30 reports a net profit of \$3,538,690, comparing with a net profit of \$2,220,520 in the corresponding period of last year.

For the nine months ending Sept. 30, General Electric has earned a net profit of \$13,645,551. In the same period last year profits from operations amounted to \$8,817,891.

Net sales billed in the nine months this year totaled \$121,735,122.

STOCKS of Distributors and Dealers Lower as Factory Inventories Increase

HOUSEHOLD		U. S. INVENTORIES, SEPTEMBER 30, 1934		Distributors		Dealers	
Lacquer (Exterior)	Cabinets with Systems	Quantity	Value	Quantity	Value	Quantity	Value
Under 3.00 cubic feet..	11,450	\$ 614,214	3,781	\$ 196,623	2,503	\$ 131,525	
1. 3 to 3.99 cubic feet..	387	27,414	436	25,419	1	71	
2. 4 to 4.99 cubic feet..	40,018	2,730,147	12,849	826,432	8,729	570,355	
3. 5 to 5.99 cubic feet..	42,299	3,617,764	11,614	956,443	8,513	687,334	
4. 6 to 6.99 cubic feet..	22,819	2,129,738	6,642	631,210	6,833	607,933	
5. 7 to 7.99 cubic feet..	21,743	2,544,182	5,907	675,667	5,631	663,842	
6. 8 to 8.99 cubic feet..	4529	529,894	773	93,746	1,402	158,988	
7. 10 to 12.99 cubic feet..	1,041	219,665	117	25,858	51	10,548	
8. 13 to 24.00 cubic feet..	98	24,726	48	11,519	7	1,707	
9. Total Lacquer	144,384	12,437,734	*50,025	*4,027,763	33,675	2,832,303	
Porcelain (Exterior)							
Cabinets with Systems							
10. Under 4.99 cubic feet..	11,694	980,262	1,352	118,103	1,596	133,660	
11. 5 to 5.99 cubic feet..	3,650	388,924	994	103,591	304	30,862	
12. 6 to 6.99 cubic feet..	6,597	764,835	3,145	367,289	3,202	365,755	
13. 7 to 7.99 cubic feet..	13,710	1,815,894	3,411	459,228	4,038	525,843	
14. 8 to 8.99 cubic feet..	4,302	638,226	1,789	277,422	1,827	269,385	
15. 10 to 12.99 cubic feet..	669	121,555	385	74,652	444	81,134	
16. 13 to 24.00 cubic feet..	2,014	486,022	331	81,042	175	40,268	
17. Total Porcelain	42,636	5,185,721	*15,319	*1,888,498	11,586	1,446,907	
18. Total Lines 9 and 17....	187,020	17,623,455	*65,344	*5,916,264	45,261	4,279,210	
19. Separate Systems	26,612	1,187,750					
20. Separate Household Low Sides	9,003	136,663	334	5,872	119	2,016	
21. Total Lines 18, 19, 20....	222,635		*65,678		45,380		
22. High Sides, 1/4 hp. or Less	1,092	59,160	204	11,121	85	4,464	
23. Cabinets—No Systems....	39,124	1,721,571	29	2,070	5	550	
24. Total Household		20,728,599		*5,935,347		4,286,240	
COMMERCIAL							
25. Water Coolers with High Sides	5,957	532,357	2,334	237,459	492	43,690	
26. Water Coolers with No High Sides....	469	26,566	97	5,197	22	1,158	
27. Ice Cream Cabinets with High Sides....	789	109,441	56	8,052	3	427	
28. Ice Cream Cabinets with No High Sides....	2,187	290,447	190	22,542	14	1,591	
29. Beverage Coolers with High Sides	1,297	100,343	172	10,788	168	11,408	
30. Beverage Coolers with No High Sides....	914	59,506	196	11,567	58	4,022	
31. Room Coolers with High Sides	2,051	583,053	287	60,247	142	30,622	
32. Room Coolers with No High Sides....	1,956	467,031	213	24,311	39	4,961	
Extra High Sides							
33. 1/4 to 1/2 hp. Incl....	9,083	811,302	1,490	127,043	315	25,897	
34. Above 1/2 to 1 hp. Incl....	3,034	396,301	1,227	162,614	262	33,729	
35. Above 1 to 5 hp. Incl....	3,082	622,426	859	181,190	213	44,196	
36. Above 5 to 10 hp. Incl....	142	66,173	14	8,421	2	1,113	
37. Above 10 hp.	114	107,504					
38. Total Lines 33, 34, 35, 36, and 37	15,455		*3,647		792		
39. Total Lines 25, 27, 29, 31, and 38	25,549		*6,496		1,597		
40. Extra Commercial Low Sides	20,578	651,599	3,063	91,176	774	22,605	
41. Miscellaneous Cases and Cabinets	727	206,854	158	46,853	19	5,454	
42. Total Commercial		5,030,903		997,460		230,873	
43. Totals—Household and Commercial		\$25,759,502		*\$5,932,807		\$4,517,113	

New York State Buys 18% of Refrigerators in September

The following report of sales by states to distributors and dealers is based on the reports of 13 members of the National Electrical Manufacturers Association (Nema) who submitted their sales figures for September, 1934. The names of reporting companies are given in columns one and two.

States and Territories	Quantity of Household Low Sides
Alabama	448
Arizona	41
Arkansas	235
California	2,987
Colorado	167
Connecticut	659
Delaware	47
Dist. of Columbia	156
Florida	1,355
Georgia	594
Idaho	114
Illinois	2,064
Indiana	369
Iowa	239
Kansas	232
Kentucky	250
Louisiana	211
Maine	295
Maryland	650
Massachusetts	1,993
Michigan	787
Minnesota	287
Mississippi	79
Missouri	1,309
Montana	67
Nebraska	121
Nevada	49
New Hampshire	212
New Jersey	1,983
New Mexico	13
New York	7,691
North Carolina	227
North Dakota	43
Ohio	1,661
Oklahoma	197
Oregon	170
Pennsylvania	2,332
Rhode Island	158
South Carolina	157
South Dakota	47
Tennessee	238
Texas	1,472
Utah	113
Vermont	130
Virginia	343
Washington	207
West Virginia	133
Wisconsin	300
Wyoming	36
Total United States	33,668
Total Canada	339
Other Foreign (Including U. S. Possessions)	8,113
Total for World	42,120

PRODUCTION of Nema Companies Drops in Sept.

HOUSEHOLD Lacquer (Exterior) Cabinets with Systems		Production Quantity
Under 3.00 cubic feet..		4,441
1. 3 to 3.99 cubic feet..		10,605
2. 4 to 4.99 cubic feet..		10,434
3. 5 to 5.99 cubic feet..		4,276
4. 6 to 6.99 cubic feet..		1,615
5. 7 to 7.99 cubic feet..		1,308
6. 8 to 9.99 cubic feet..		25
7. 10 to 12.99 cubic feet..		3
8. 13 to 24.00 cubic feet..		.....
9. Total Lacquer		*33,485
Porcelain (Exterior) Cabinets with Systems		
10. Under 4.99 cubic feet..		320
11. 5 to 5.99 cubic feet..		670
12. 6 to 6.99 cubic feet..		1,098
13. 7 to 7.99 cubic feet..		1,133
14. 8 to 9.99 cubic feet..		646
15. 10 to 12.99 cubic feet..		60
16. 13 to 24.00 cubic feet..		4
17. Total Porcelain		*4,044
18. Total Lines 9 and 17....		*37,529
19. Separate Systems		16,231
20. Separate Household Low Sides		2,909
21. Total Lines 18, 19, 20....		*56,669
22. High Sides, 1/4 hp. or Less		1,821
23. Cabinets—No Systems....		16,899
24. Total Household .....		.....
COMMERCIAL		
25. Water Coolers with High Sides		524
26. Water Coolers with No High Sides....		8
27. Ice Cream Cabinets with High Sides....		39
28. Ice Cream Cabinets with No High Sides....		38
29. Beverage Coolers with High Sides		323
30. Beverage Coolers with No High Sides....		.....
31. Room Coolers with High Sides		18
32. Room Coolers with No High Sides....		3
Extra High Sides		
33. 1/4 to 1/2 hp. Incl....		2,045
34. Above 1/2 to 1 hp. Incl....		431
35. Above 1 to 5 hp. Incl....		199
36. Above 5 to 10 hp. Incl....		3
37. Above 10 hp. ....		.....
38. Total Lines 33, 34, 35, 36, and 37		*3,134
39. Total Lines 25, 27, 29, 31, and 38		*4,038
40. Extra Commercial Low Sides		812
41. Miscellaneous Cases and Cabinets		30
42. Total Commercial .....		.....
43. Totals—Household and Commercial .....		.....

SERVICE

Marsh Introduces New Line of Low Pressure Service Gauges

CHICAGO—A new line of service gauges for low-pressure refrigerants has been announced by the Jas. P. Marsh Corp. here. The new gauges are similar in their basic construction to previous refrigeration gauges built by Marsh, A. D. Rose, sales manager, explains, and they have two added features.

First is the fact that they can be used on service where the pressure applied to the instruments will be the total amount of the dial reading. In the past, Mr. Rose relates, it has been necessary for such gauges to be graduated to twice the highest pressure to which the instruments will be subjected.

Use for Full Reading

In the new Marsh gauges, he says, it is possible to utilize the gauges to the full dial reading. "This means that where a gauge formerly reading to 100 lbs. was necessary on 50 or 60 lbs. service; now a gauge reading to 60 lbs. is available, with the result that more accurate readings can be taken in service work."


A second feature of the new instruments is the new type of "zero adjustment" by which the service man can re-establish proper accuracy of the gauge by making an adjustment right on the job.

Can Correct Relationship

"When a test gauge is knocked out of adjustment, what happens is that the proper relation of the Bourdon tube to the movement mechanism is impaired," Mr. Rose states. "In the new gauges, by merely turning a screw which is located either in the back of the instrument or on the dial, the relationship can be re-established correctly."

In one type, a screw protrudes through the back of the gauge casing to provide the "zero adjustment." In the other type, it is necessary to remove the rim and glass, and turn a screw which is located through an opening in the gauge dial.

Internal construction of the new gauges embodies a new type of Bourdon tube which is rolled by a method developed in the Marsh laboratory, Mr. Rose states. The tubes are tempered and seasoned with a process developed particularly for refrigeration gauges, he says. The Bourdon tube, multiplying movement, and other parts are rugged in construction, and will withstand a pressure 50 per cent greater than the maximum dial reading without damage, he claims.



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Melco Will Market Frigidaire Parts

NEW YORK CITY—Melchior, Armstrong, Dessau Co., refrigeration supply and export organization here, is introducing a line of Frigidaire replacement parts manufactured by E. R. Capewell of Philadelphia and Camden, and has issued a catalog on the new stock.

Included in the parts are pistons, flapper valves, connecting rods, eccentrics, eccentric shafts, bellows seal assemblies, piston pins, piston rings, piston valve discs, piston valve disc retainers, flapper valve reeds unpolished, flapper valve reeds polished, flapper valve reed and seat, flapper valve spring and buttons, flapper valve buttons, Woodruff keys, float valve needles, water valve stems, filters, pads and screens, gaskets.

Marshalltown Builds Siamese Test Gauge

MARSHALLTOWN, Iowa—A new Siamese test gauge for measuring pressures on the high and low sides of household electric refrigerators has been introduced by the Marshalltown Mfg. Co. of this city.

The instrument is furnished in a square case approximately 4 by 4 in., with two gauges, one for the high pressure side of a system, the other for the low side. High side gauge is graduated from zero to 300 lbs. pressure, while the low side compound gauge reads from 30 in. of vacuum to atmospheric and up to 60 lbs. pressure.

According to J. M. Considine, sales manager of the company, the instrument can be used with any refrigerant which will not attack brass. Connections to both gauges are 1/8-in. female pipe thread. Crystals are non-breakable. The instrument is supplied in a leatheroid container.

If it should become necessary to reset the pointers to zero, Mr. Considine states, this is accomplished by removing the cover and turning the dial until the pointer is in position.

Williams & Co. Organizes Refrigeration Division

PITTSBURGH—Williams & Co., Inc., supplier of welding equipment, metals, and tubing for mechanical apparatus, has just established a refrigeration division through which refrigeration supplies will be furnished. The company has three warehouses—at Cleveland, Cincinnati, and Pittsburgh—where refrigeration stocks will be maintained.

Refrigeration equipment to be handled includes belts, commercial cooling units, controls, dehydrators, expansion valves, filters, fittings, gaskets, gauges, ice cream cabinet parts, refrigerants, oils, thermometers, service tools, aluminum tubing, and solenoid, water-regulating, and two-temperature valves.

Correction

John E. Hersan, service man of Elizabeth, N. J., calls our attention to the fact that illustrations of the suction and discharge valves shown in connection with the article on servicing Majestic standard units were reversed in the Sept. 12 issue of ELECTRIC REFRIGERATION NEWS.

How to Approximate Flow Of Condensing Water

LOS ANGELES—There is a simple way to check water flow on water-cooled condensing units, according to *The Liquid Line*, house organ published by Refrigeration Service, Inc., of this city. "For all practical purposes, ounces of water in 30 seconds equals gallons per hour. Thus in a half minute, hourly consumption can be checked."

PATENTS

Issued Oct. 23, 1934

1,977,608. ICE TRAY HEATER. John G. Blystone, Beverly Hills, Calif. Application July 23, 1929. Serial No. 380,321. 4 Claims. (Cl. 62-108.5.)

1. The combination with a refrigerator ice tray, having double walls and partitions, of heating elements imbedded in said double walls and partitions and means including a contact on said tray and a cooperating contact on the refrigerator within which the tray is positioned for delivering heat to said heat elements while the tray is positioned within the refrigerator.

1,977,820. AIR RELEASE DEVICE FOR HUMIDIFIERS AND THE LIKE. Edward S. Cornell, Jr., Larchmont, N. Y. Application March 25, 1933. Serial No. 662,723. 2 Claims. (Cl. 219-38.)

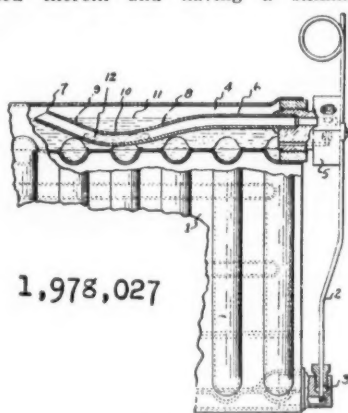
1. An air release device for an associated heating radiator and a therewith connected humidifier provided with a heater unit, the air release device comprising a hollow body provided with a nipple portion communicating with a lower portion of the interior of the hollow body, the said nipple portion being arranged to be connected with the radiator through a port in the radiator, said air release device comprising an opening arranged for connection with an air release valve communicating with the interior of the device at a location above the stated region of communication of said lower disposed nipple portion, the air release device further comprising an opening communicating with the interior of its hollow body at a location above the stated region of communication of said lower disposed nipple portion, said second named opening being arranged for connection and communication with a lower portion of the heater element of the humidifier, the upper portion of the heater element of the humidifier being connected with the interior of the radiator.

1,977,919. METHOD OF REFRIGERATION. Louis P. Reiss, Dallas, Tex. Application Aug. 14, 1931. Serial No. 557,026. 3 Claims. (Cl. 62-91.5.)

2. In a refrigerator as described, the combination with a refrigerant cabinet, of means for supporting carbon dioxide ice and water ice therein, and heat conducting means interconnecting the two refrigerants, the water ice being in thermal contact with the air currents in the cabinet.

1,978,027. OIL REMOVING DEVICE FOR REFRIGERATOR EVAPORATORS. Roland H. Money, Cincinnati, Ohio, assignor to The Crosley Radio Corp., Cincinnati, Ohio, a corporation of Ohio. Application June 13, 1933. Serial No. 675,570. 9 Claims. (Cl. 62-126.)

9. In combination with an evaporator of the flooded type, a skimming device located therein and having a skimming



1,978,027

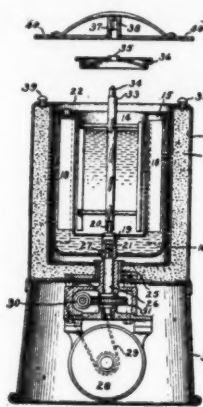
orifice located at the liquid level of refrigerant in said evaporator, having withdrawal means for gaseous refrigerant associated with said skimming orifice, and having means in operative connection with said aforementioned means for the collection of lubricant, said last mentioned means being of a size to permit the collection of a quantity of lubricant large enough to pass as a body through said withdrawal means before closing off said withdrawal means.

1,978,028. DELIVERY OF REFRIGERANT TO EVAPORATORS. Roland H. Money, Cincinnati, Ohio, assignor to The Crosley Radio Corp., Cincinnati, Ohio, a corporation of Ohio. Application March 15, 1934. Serial No. 715,667. 3 Claims. (Cl. 62-126.)

1. In a refrigerating system having an evaporator of the shell type with an upper header for the withdrawal of gaseous refrigerant and a lower header for the introduction of liquid refrigerant, means for conducting liquid refrigerant in a substantially continuous stream directly from a condenser to one end of said lower header, and means for introducing said refrigerant into said header, said means comprising a thin walled heat conductive tubing extending into said header from said end and terminating in said header in the general region of the mid portion thereof, said tubing delivering refrigerant at its said termination toward opposite end of said header whereby to set up mechanical agitation of the refrigerant in a substantial portion of said header, and said tubing, due to the passage of heated refrigerant therethrough, setting up agitation by boiling in the remaining portion of said header, thereby producing conditions of even activity throughout said evaporator.

1,978,176. APPARATUS AND METHOD FOR MAKING ICE CREAM. Christen Steenstrup, Schenectady, N. Y., assignor to General Electric Co., a corporation of New York. Application June 12, 1928. Serial No. 284,743. 10 Claims. (Cl. 62-114.)

1. A receptacle for making ice cream or



1,978,176

the like, an outer wall forming a sealed chamber surrounding said receptacle and containing a freezing solution, means extending from the wall of said receptacle into said chamber in spaced relation to the outer wall for conducting heat from the receptacle to the freezing solution, and another means extending from the outer wall of said chamber into the same in spaced relation to the wall of said receptacle for conducting heat from the solution in said chamber to cool the same.

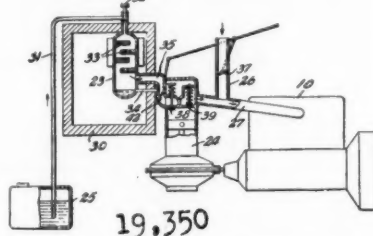
1,978,382. CHILLING METHOD AND APPARATUS. Leo D. Jones, Philadelphia, Pa., assignor to The Sharples Specialty Co., Philadelphia, Pa., a corporation of Delaware. Application Jan. 7, 1929. Serial No. 330,893. 13 Claims. (Cl. 62-126.)

10. In chilling apparatus, an interiorly ringlike container for refrigerating medium, means for maintaining in heat exchange relation with the medium therein a substance to be chilled, means for withdrawing a vapor from the container, a liquid-dispersing jet supplied with volatile liquid refrigerant under pressure and discharging in said container in a direction to promote circulation around its ringlike interior of vapor containing dispersed particles of volatile liquid refrigerant, and means for maintaining the ringlike interior of said container unsealed by liquid throughout its ring-like extent.

REISSUE

19,350. REFRIGERATION. Carl Georg Munters and Sigurd Mattias Backstrom, Stockholm, Sweden, assignors to Platen-Munters Refrigerating System Aktiebolag, Stockholm, Sweden, a corporation of Sweden. Original No. 1,864,608, dated June 28, 1932. Serial No. 472,221. Aug. 1, 1930. Application for reissue June 12, 1931. Serial No. 730,348. In Germany Aug. 2, 1929. 36 Claims. (Cl. 62-169.)

31. Refrigeration apparatus including an internal combustion engine, a supply tank for liquid fuel, a conduit for fuel to said



19,350

engine, means for controlling flow of liquid fuel during operation of said engine from a higher pressure in said tank into said conduit at a lower pressure, and a thermally insulated storage compartment containing part of said conduit adjacent said control means.

Pratt Opens Outdoor Xmas Tree Campaign

SAN FRANCISCO—Clarence F. Pratt, head of the California Refrigerator Co. here and founder and president of the Outdoor Christmas Tree Association of California, will open the latter group's annual drive to beautify California cities during the Christmas season when he addresses the business men of Fortuna, Calif., Oct. 24. Fortuna last year received an award for its Christmas decorations.

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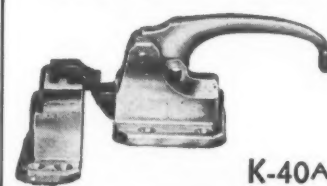
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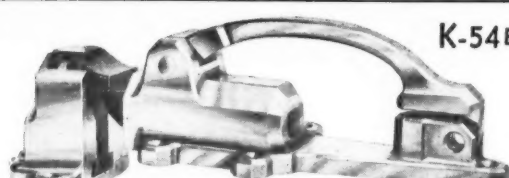
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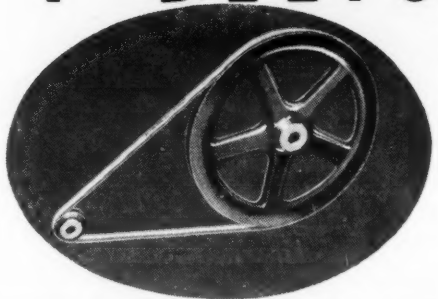
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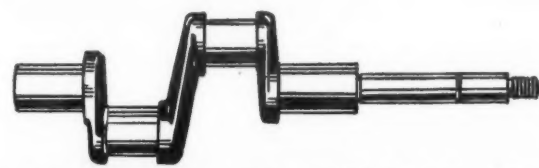
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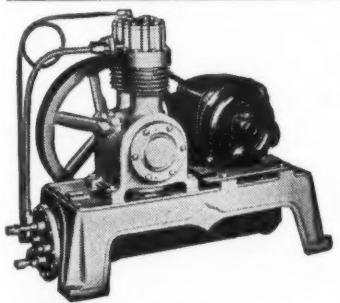
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11-7-34

QUESTIONS

Ice Trays

No. 1927 (Chemical Manufacturer, New York)—"One of our customers is making a product to be frozen in household electrical refrigerators. We have been asked to ascertain what effect, if any, the trays generally used in electrical refrigerators will have on this product. We have already tested trays made of aluminum and rubber. We would appreciate your advising just what other products are currently being used by refrigerator manufacturers for trays and, if possible, just which manufacturers use something other than rubber or aluminum. This information would enable us to go to such manufacturers for the trays we desire, in order to complete our tests. Your cooperation in this connection will indeed be appreciated."

Answer: Aluminum is the most commonly used material in the manufacture of ice cube trays, the newest development in the use of this material being the anodic treatment which prevents discoloration. A few years ago most ice cube trays were made of tinned copper.

Flexible rubber ice cube trays have also been extensively used in the last few years. These rubber trays were invented by Lloyd Copeman, a refrigerating engineer, and are made by Inland Mfg. Co. of Dayton, Ohio.

McCord Radiator & Mfg. Co. of Detroit makes a stainless steel ice tray, one cube in width, from which cubes are ejected by flexing the tray along its length.

Jomoco's Address

No. 1928 (Manufacturer, New York)—"We are writing to inquire whether you would be good enough to give us the address of the firm of Jomoco, Inc., makers of household electric refrigerating units. Your assistance in this matter shall be much appreciated."

Answer: Jomoco, Inc., Subsidiary of Johnson Motor Co., is located at Waukegan, Ill.

'Ceomatic' Refrigerator

No. 1929 (Ice Manufacturer, Indiana)—"In the second column on page 2 of Oct. 10, 1934, ELECTRIC REFRIGERATION NEWS appeared an article headed 'Lewis & Conger Show Small Air Conditioner and CO-2 Refrigerator.'"

"We would like to get in touch with Morgan & Co. of St. Paul, Minn., given in the article as manufacturers of the Portable Refrigerator or 'Ceomatic.' As our first letter addressed to Morgan & Co. was returned unclaimed, we would appreciate your referring this letter to them. You, no doubt, have means of reaching them."

"We would like to receive circulars and illustrations, distributors' prices, etc.; also fuller description of their insulation on the 'Ceomatic' and performance."

"If available, we should also like to receive some information regarding the source of supply and prices on solid CO₂."

Answer: Through an error the name of the manufacturer of the 'Ceomatic' Portable CO₂ Refrigerator was given as Morgan & Co. whereas it should have been Moran & Co. The address of this concern is 602 Globe building, St. Paul, Minn.

The following companies are listed in the 1934 REFRIGERATION DIRECTORY as manufacturers of solid CO₂:

American DryIce Corp.
205 E. 42nd St., New York City.
Carbonic Products Corp.
3405 Woolworth Bldg., New York City.
International Carbonic Engineering Co.
Kennett Square, Pa.
Mathieson Alkali Works, Inc.
250 Park Ave., New York City.
Michigan Alkali Co.
1622 Ford Bldg., Detroit, Mich.
Pure Carbonic, Inc.
60 E. 42nd St., New York City.
Zero Ice Corp.
14460 Linwood Ave., Detroit, Mich.

Welsbach Lubricant

No. 1930 (Dealer, New Jersey)—"Kindly send me the following information as soon as possible:

1. Kind of lubricant used in Welsbach refrigeration compressors. (It is a black greasy material).
2. Where same can be obtained.
3. Directions as to quantity and method of adding to units in operation."

Answer: Communicate directly with the Welsbach Co., Gloucester City, New Jersey. This company, while no longer active in the electric field, still maintains a service department for taking care of machines in use.

'Allen' Cooler

No. 1931 (Welfare Commission, Michigan)—"We have been having considerable trouble obtaining information concerning 'Allen' Cooler Units, No. 50-B Coil, Unit Cost \$41.24, and thought that, perhaps, you could help us."

"What is such a cooler capable of

doing? Would it be of use in the storage of meats on a fairly large scale? Any information that you can give us will be greatly appreciated."

Answer: There is no record in our files of an Allen Cooler for meats or vegetables. The Allen Filter Co., 25 S. St. Claire St., Toledo, Ohio, manufactures water-cooling cabinets and accessories, but we have never heard of them building a meat cooler. Some water coolers have a small compartment for bottled goods, but these would be of no consequence for meat storage.

SO-2 Purchased Yearly

No. 1932 (New Jersey)—"Among your statistics do you have data on the amount of SO₂ purchased yearly by the manufacturers of Sulphur Dioxide machines. Would appreciate having this information as early as is convenient."

"I searched the 1934 REFRIGERATION DIRECTORY but do not find the same. Everything else is there."

Refrigeration Production

No. 1933 (Furniture Manufacturer, Ohio)—"Can you give me any information regarding the production of electric refrigerators (units) the first eight or nine months of this year, and whether or not the production exceeded the industry quota for the same period of time."

Answer: No record of unit production by all manufacturers of household electric refrigerators has been compiled by ELECTRIC REFRIGERATION NEWS, but monthly production of household low sides by members of the Refrigeration Division of the National Electrical Manufacturers Association (Nema) was as follows:

January	55,500
February	88,387
March	107,702
April	147,830
May	186,439
June	121,655
July	81,463
August	86,606
September	56,669

Shipment to distributors and dealers by all manufacturers of household electric refrigerators totaled 1,272,600 units during the first nine months of 1934, being about 33 per cent ahead of the 956,800 units estimated for the same period of 1933. (See page 1 of this issue).

Ribbon Ice Manufacturers

No. 1934 (Manufacturer, Ohio)—"We have received an inquiry for the manufacture of ribbon ice."

"We understand that there is some method where ice is frozen and then rotated out in small blocks."

"We are not familiar with this equipment and we are wondering if you have any information concerning it."

Answer: There are two manufacturers of ribbon ice. York Ice Machinery Corp., York, Pa., makes a "FlakIce" machine, and the Vilter Mfg. Co., builds what is called the "PakIce" machine.

C. E. Phillips & Co., Address

No. 1935 (Spain)—"In one of your past issues I noted reference to a metal spray process developed by C. E. Phillips & Co. of Detroit. A letter addressed to this company has not been replied, and I would like very much to know if you can give me the correct name and address."

Answer: Address C. E. Phillips & Co., 5443 Twelfth St., Detroit, Mich.

Refrigerator Saturation

No. 1936 (Laundry Co., New York)—"Please advise us what percentage of homes in America are equipped with mechanical refrigeration?"

Answer: As of Jan. 1, 1934, ELECTRIC REFRIGERATION NEWS estimated that there were about 4,665,000 household electric refrigerators in use in the United States making the national wired homes saturation about 23.5 per cent.

During the first nine months of 1934, an estimated 1,183,600 household electric refrigerators were sold in the United States. Making a rough allowance for obsolescence and replacement for the first nine months and adding this year's sales to date, there are roughly 5,650,000 refrigerators now in use, making the wired homes saturation in the vicinity of 27.5 per cent.

Department Store Sales

No. 1937 (Michigan)—"For what percentage of total household electric refrigerator sales were department stores responsible in 1933 and are they increasing their relative position in 1934? I would also like a comparison of the percentage of sales made by department stores and other sales outlets since 1926."

Answer: A survey among 14 manufacturers of household electric refrigerators representing nearly 70 per cent of industry sales, was included in the Statistical Section of the 1934 REFRIGERATION DIRECTORY. Among other information, this survey showed the relative percentage of refrigerator business obtained from department

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PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Electric Refrigeration News, 5229 Cass Ave., Detroit, Mich.

POSITIONS WANTED

FIELD MAN, Sales Engineer, and Branch Manager with 15 years experience with oil burners, household and commercial refrigeration, and air conditioning. Can handle sales training, installation, and service. Has unusual record as field supervisor, district sales manager, and branch manager. Has been with major electric refrigerator manufacturer for 10 years. Box 647.

RENTING AND QUOTATIONS WANTED

WANT to rent office space and desire quotations from well equipped plant having ample assembling, drying and testing facilities to build ice machines. We are developers of new sealed compressors, water coolers, small compact refrigerating systems, with orders available. Our credit okay. Location near Detroit preferred. Box 648.

SCHOOLS

MEN: If you are mechanically inclined, have fair education, and can see the future in Refrigeration and Air Conditioning, we can train you in spare time. Small fee includes Instruction, Consultation, and Employment Service, also tools. Dr. O. F. Schoeck School of Refrigeration, Alton, Ill. EMPLOYERS: We can furnish trained men in your vicinity.

INDEPENDENT SERVICE COMPANIES

HALELECTRIC thermostat repair service. B & B, G.E., Cutler-Hammer, Penn. Ranco, Tag, etc. Float valve needles reground and polished. Expansion valves repaired. Gas service, Ethyl, Methyl, Iso-Butane, Sulphur. Your cylinder or ours. Competitive prices. Distributors of "Flawless Brand" tubing. Halclectric Laboratory, 1793 Lakeview Road, Cleveland, Ohio.

ALLELECTRIC:—Rebuilding and supplies. All standard make compressor units, bodies, floats, motors, etc., rebuilt with genuine replacement parts. Our shop is equipped with modern machinery; we now reface old shafts, seals, etc., equal to new. Quick service—lowest prices—all labor and material guaranteed. Price list mailed to dealers on request. Allelectric Refrigeration Service Co., Inc., 451 East 163rd St., New York City.

SERVICE

AS A SERVICE to subscribers we provide a binder for keeping your file copies of the News in neat and orderly condition. Heavy board covers bound in imitation leather with name of publication stamped in gold. Price \$3.75 postpaid in United States. Address Electric Refrigeration News, 5229 Cass Ave., Detroit, Mich.

WANTED

Sales Managers
Dealer Contact Men
Experienced Retail Salesmen

We believe we can place a few high grade experienced Refrigeration Men with some of our larger distributors who are expanding their Kelvinator activities.

Application by letter only, giving experience, references, etc., to Kelvinator Corporation, Detroit, Michigan.

stores and other electric refrigerator sales outlets.

Department store sales activities and merchandising activities are also discussed in the Review Section of the DIRECTORY on pages 649 and 667.

The October 3 issue of ELECTRIC REFRIGERATION NEWS specially featured the activities of department stores in the electric refrigeration field.

Stoll Refrigerator Co. Is Formed in Morrisville, Pa.

MORRISVILLE, Pa.—Fredrick J. Stollsteiner, formerly connected with C. V. Hill & Co., Inc., of Trenton, N. J., has organized the Stoll Refrigerator Co., with offices at 40 W. Bridge St. here, for the manufacture of commercial refrigerator equipment.

TEMPRITE Instantaneous Cooling

"The leading cooler for water, beer and other beverages"

Write for Catalog

Temprite Products Corporation

(Formerly Liquid Cooler Corporation)

1349 Milwaukee East :: Detroit